Commonwealth of Virginia

Department of Medical Assistance Services

2007 Focused Study Report: Well-Child and Adolescent Well Care

Prepared by

MPRO

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Executive Summary

Overview

This study of well-child service utilization by children in Family Access to Medical Insurance Security (FAMIS), State Children's Health Insurance Program (SCHIP) Medicaid Expansion, and FAMIS Plus programs assessed the extent to which enrollees obtain well-child visits in accordance with recommended age-specific guidelines. Michigan Peer Review Organization (MPRO) stratified the sample into four age groups: 15 months, 3 – 6 years, 7 – 11 years, and 12 – 20 years.

Methodology

MPRO obtained data for the study from administrative claims combined with information collected from a review of a sample of patient medical records. The report presents study results by delivery system and program. Delivery systems include fee-for-service (FFS), managed care organizations (MCO) and primary care case management (PCCM). Programs include FAMIS, FAMIS Plus, and SCHIP Medicaid Expansion. Whenever possible, MPRO used nationally accepted performance indicators from Healthcare Effectiveness Data and Information Set (HEDIS®) as the basis for specifications for selection, abstraction, analysis, and comparison benchmarks. Applicable HEDIS® measures include *Well-Child Visits in the First 15 Months of Life*; *Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life*; and *Adolescent Well Care Visits*.

MPRO developed the data collection tool using clinical guidelines published by the American Academy of Pediatrics (AAP), HEDIS® specifications from the National Committee for Quality Assurance (NCQA), input from experts in tool design and healthcare delivery, and covered services detailed in the MCO/ Virginia Department of Medical Assistance Services (DMAS) contract for FAMIS.

Study Results

Children aged 15 months received the appropriate number of visits (six) in 52.1% of cases, a rate just below the HEDIS® 2008 national Medicaid average. Enrollees aged 3 – 6 years had the highest well-child visit rate at 61.5%, also below the HEDIS® 2008 national Medicaid average.

Cholesterol screening and weight measurement were the most frequently performed well-child screening and assessments. Height measurement, blood pressure assessment, and immunization review were among the top five activities covered during a well-child visit. Hearing and dental assessment were conducted the least frequently.

MPRO organized the study according to seven questions designed to guide development, reporting and analysis related to the topic. Table A provides a summary of the results of each of the seven study questions.

Table A. Summary of Well-Child Study Questions and Results

	Study Question	Summary of 2007 Results
1.	What proportion of enrollees who turned 15 months old during the review period had the following number of well-child visits with a PCP during their first 15 months of life: zero, one, two, three, four, five, six, or more?	▪ Fifty-three percent of enrollees in FAMIS received six well-child visits during their first 15 months of life. There were statistically significant differences between rates for MCO and FFS delivery systems for six visits. ▪ More than 80% of FAMIS enrollees aged 15 months received four or more well-child visits during their first 15 months of life. ▪ Rates for enrollees in FAMIS Plus for six well-child visits during the first 15 months of life were just below the HEDIS® 2008 national Medicaid average. ▪ There were no significant differences between FAMIS and FAMIS Plus for well-child visit rates for enrollees aged 15 months.
2.	What proportion of enrollees aged 3 – 6 years had at least one comprehensive well-child visit with a PCP during the measurement period?	▪ Rates for enrollees in MCO and PCCM delivery systems were significantly higher than FFS. The combined rate of 61.5% was below the HEDIS® 2008 national Medicaid average of 65.3%. ▪ Rates for FAMIS at 63.3% were similar to rates for FAMIS Plus at 65.4%.
3.	What proportion of enrollees aged 7 – 11 years had at least one comprehensive well-child visit with a PCP during the measurement period?	▪ Approximately 33.4% of enrollees aged 7 – 11 years had at least one well-child visit. MCO rates were significantly higher than FFS and PCCM rates. ▪ Rates for FAMIS and FAMIS Plus were similar at 32.2% and 29.4%, respectively.
4.	What proportion of enrollees aged 12 – 20 years had at least one comprehensive well care visit with a PCP during the measurement period?	▪ The MCO rate of 41.8% was significantly higher than FFS and PCCM rates. The overall rate of 35.7% was less than the HEDIS® 2008 national Medicaid average of 42.1%. ▪ Rates for FAMIS (35.2%) and FAMIS Plus (36.4%) were similar.
5.	What proportion of enrollees aged 15 months, 3 – 6 years, 7 – 11 years, or 12 – 18 years received the well-child service components during the measurement period?	▪ Developmental assessments were most often performed for enrollees aged 15 months and least often for children aged 7 – 11 years. ▪ Physical exam rates were the highest among the three required components. ▪ Rates for anticipatory guidance varied substantially by age with about 32% of enrollees aged 7 – 11 receiving anticipatory guidance and 85% of enrollees aged 15 months. ▪ Rates for FAMIS and FAMIS Plus were similar for all components for all groups except for enrollees aged 7 – 11 years where there were significant differences between the two populations for each component.
6.	Are enrollees receiving screening histories, measurements, sensory screening, and developmental assessments along with well-child service components at the AAP and "Bright Futures" program recommended age-specific intervals?	▪ Rates for the different elements vary substantially from single digits to rates above 90% depending on the age group and the element itself. ▪ Rates for height and weight measurement were the highest among age ranges. ▪ Dental and hearing screening rates were the lowest among age ranges. ▪ Rates for FAMIS were significantly higher than rates for FAMIS Plus enrollees for several measures for the youngest age groups. There were fewer differences between the populations for the older children.
7.	Are enrollees receiving hemoglobin, lead, TB, and urinalysis screening at the AAP recommended age-specific intervals?	▪ Tuberculin screening rates decreased as age increased with the youngest age group rate at 16.2% and the oldest at 8%. ▪ Verbal and blood lead screening rates were highest for enrollees aged 15 months at 27.4% and 36.6%, respectively. Rates for FAMIS Plus were significantly higher than rates for FAMIS enrollees for this indicator. ▪ Hematocrit or hemoglobin blood testing rates were between 40% and 50% for the two younger age groups, but 20% and 30%, respectively, for enrollees aged 7 – 11 and 12 – 20 years. ▪ Urinalysis rates were highest for enrollees aged 3 – 6 years at 35.6%, followed by rates for enrollees aged 12 – 20 years at 27.9%.

Conclusion

Overall, the well-child visit rates increased from 2005 to 2007. The enrollees in MCOs received well-child visits at significantly higher rates than the enrollees in FFS. Although the combined well-child visit rates are continuing to improve, there remain opportunities to further increase visit rates. MPRO recommends that improvement activities continue in order to increase visit rates for all age groups and delivery systems. Efforts should also be focused to ensure each exam consists of the necessary assessments, components, and screening. Specifically, the frequency of hearing, vision, and dental screenings for all age groups is an area where improvement can impact other activities such as long term development and school performance. Analysis to determine what is preventing the exams from taking place and why the necessary components are not completed can be especially useful in targeted interventions and activities.

Chapter 1 – Focused Study Overview

Introduction

The Virginia Department of Medical Assistance Services (DMAS) is responsible for providing healthcare to the thousands of low income children enrolled in Medicaid in the state. DMAS selected five topics for focused studies: Well-Child and Adolescent Well Care, Immunizations; Access to Primary Care Practitioners (PCPs); Use of Appropriate Medications for People with Persistent Asthma; and Prenatal Care. The focused studies reviewed care provided to enrollees in the fee-for-service (FFS), managed care organizations (MCOs), and Primary Care Case Management (PCCM) delivery systems. The majority of Medicaid enrollees (58%) aged 15 months – 20 years are in FFS, 36% are in MCOs, and the remaining 6% are in PCCM.

This report provides results for the Well-Child and Adolescent Well Care focused study. Study results are provided by delivery system and program. Descriptions of the programs are provided in *Appendix A – Description of Medicaid Programs and Delivery Systems.*

Programs

Virginia's State Children's Health Insurance Program (SCHIP), is called the Family Access to Medical Insurance Security (FAMIS), and is authorized under Title XXI of the Social Security Act for low-income people. FAMIS is financed by Federal (65%) and State (35%) funds and administered by the Virginia Department of Medical Assistance Services (DMAS) in accordance with Federal and State guidelines. DMAS created FAMIS in 2001 to provide health insurance coverage to low income children whose families' incomes are too high to qualify for Medicaid. FAMIS covers eligible children (who are not eligible for Medicaid, are not covered under health insurance, and are not members of a family eligible for coverage under the State employee health plan). FAMIS provides coverage to children up to age 19 in households with incomes ranging from 133% to 200% of the federal poverty level (FPL). Enrollee eligibility aid categories 006, 007, 008, 009 are included in the FAMIS program.

Virginia operates a combination SCHIP program that includes and Medicaid Expansion component that is funded under Title XXI. The Medicaid Expansion program covers children ages 6 through 19 in households with incomes ranging from 100% to 133% of FPL (children younger than six years of age within this FPL range are covered by Medicaid). For this study, SCHIP Medicaid Expansion is defined as enrollees in eligibility aid category 094.

FAMIS Plus (Children's Medicaid) is DMAS' designation for children covered under Title XIX of the Social Security Act. FAMIS Plus provides health insurance coverage for children ages 0-19 years from households with incomes ranging from 0% to 100% of the federal poverty limit and for children ages 0-6 years from households with incomes ranging from 100%-133% of FPL. FAMIS Plus includes enrollees from eligibility aid categories 071, 072, 073, 074, 075, 076, 081, 082, 083, 085, 086, 088, 090, 091, 092, 093, 097, 098, and 099.

Delivery Systems

The focused study reviewed care provided to enrollees in FAMIS, FAMIS Plus and SCHIP Medicaid Expansion programs. The focused study used three delivery system classifications to report findings:

1. FFS – primary care providers are paid directly by DMAS on a Fee For Service (FFS) basis
2. Primary Care Case Management (PCCM) Program (MEDALLION) – managed care
3. MCO – recipients are enrolled in one of five contracted Managed Care Organizations (Medallion II) – managed care

Methodology

Selection Parameters

Table 1 displays the selection parameters used to define the population included in the well-child and adolescent well care focused study (referred to as the "well-child focused study" in this report).

Table 1. Selection Parameters for Well-Child Focused Study

Program Types	FAMIS (Enrollee Eligibility Aid Category = 006, 007, 008, 009) FAMIS Plus (Enrollee Eligibility Aid Category = 071, 072, 073, 074, 075, 076, 081, 082, 083, 085, 086, 088, 090, 091, 092, 093, 097, 098, 099) SCHIP Medicaid Expansion (Enrollee Eligibility Aid Category = 094)
Delivery Systems	FFS (Benefit Definition Plan Subprogram Code = 01) PCCM (MEDALLION) (Benefit Definition Plan Subprogram Code = 02, 07) MCO (Medallion II) (Benefit Definition Plan Subprogram Code = 03, 04)
Enrollment Criteria	Minimum of 12 months continuous enrollment (with no more than one enrollment gap of up to 45 days) during 2007. Age 15 months must be continuously enrolled from 30 days after birth through 90 days after the first birthday.
Diagnosis	None
Age	15 months, 3 – 6 years, 7 – 11 years, 12 – 20 years
Sex	Male, Female
Office Visit Requirement	At least one visit with a PCP
Review Period	Age 15 months: birth through 2 years Ages 3 – 20 years: 1/1/2007 – 12/31/2007

Sampling and Data Collection

The Michigan Peer Review Organization (MPRO) selected a random sample of enrollees for the well-child focused study from the FAMIS, SCHIP Medicaid Expansion and FAMIS Plus populations and stratified the sample by delivery system, then further stratified it into four age groups: 15 months, 3 – 6 years, 7 – 11 years, and 12 – 20 years.

Table 2 shows the population, sample selection, and abstraction rates for the study.

Table 2. Sample Selection for Well-Child Study (FAMIS + SCHIP Medicaid Expansion + FAMIS Plus Combined)

Age Range	Population	Sample	Requested Records	Abstracted Records
15 months	25,259	747	704	573
3 – 6 years	81,407	999	881	729
7 – 11 years	75,994	1,394	1,195	932
12 – 20 years	94,819	1,449	1,240	907
Total	277,479	4,589	4,020	3,141

Table 3. Sample Selection for Well-Child Study – FAMIS Only

Age Range	Population	Sample	Requested Records	Abstracted Records
15 months	609	303	275	226
3 – 6 years	6,810	398	353	302
7 – 11 years	7,583	428	364	277
12 – 20 years	9,641	483	426	311
Total	24,643	1,612	1,418	1,116

Table 4. Sample Selection for Well-Child Study – FAMIS Plus Only

Age Range	Population	Sample	Requested Records	Abstracted Records
15 months	24,650	444	429	347
3 – 6 years	74,474	483	426	347
7 – 11 years	61,832	483	409	312
12 – 20 years	76,516	483	414	291
Total	237,472	1,893	1,678	1,297

Table 5. Sample Selection for Well-Child Study – SCHIP Medicaid Expansion Only

Age Range	Population	Sample	Requested Records	Abstracted Records
15 months	NA	NA	NA	NA
3 – 6 years	123	118	102	80
7 – 11 years	6,579	483	422	343
12 – 20 years	8,662	483	400	305
Total	15,364	1,084	924	728

Data combined from claims and medical record abstraction were used to calculate the number of well-child visits within the study period. Data were abstracted from medical records and combined with administrative data extracted from the State's claims processing system with service dates from birth – 2nd birthday for enrollees who turned 15 months old during 2007 and between January 1, 2007 and December 31, 2007 for enrollees aged 3 – 20 years. Applicable Healthcare Effectiveness Data and Information Set (HEDIS®) measures include: *Well-Child Visits in the First 15 Months of Life*; *Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life*; and *Adolescent Well Care Visits*.

MPRO developed a data collection tool using clinical guidelines published by the American Academy of Pediatrics (AAP), HEDIS® specifications from the National Committee for Quality Assurance (NCQA), and input from experts in tool design and health care delivery. The tool is heavily based on the AAP recommendations for preventive pediatric health care[1] and on covered

[1] Recommendations for Preventive Pediatric Health Care. *American Academy of Pediatrics*. 1995; 96: 373-374.

services as detailed in the MCO contract[2] for FAMIS (see *Appendix B – Well-Child Focused Study Abstraction Tool*).

The preventive health care chart (periodicity schedule) published by the AAP specifies the intervals at which screening, vision, and hearing services should be provided to children (see *Appendix C – AAP Periodicity Schedule*). The preventive services include:

- Comprehensive health and developmental history;
- Comprehensive unclothed physical exam;
- Appropriate immunizations;
- Laboratory tests;
- Lead toxicity screening;
- Health education;
- Vision services;
- Dental services; and
- Hearing services.

As part of the data collection process, MPRO sent a medical record list to providers requesting submission of medical records for abstraction (see *Appendix D – Medical Record Request Letters*). MPRO's review nurses abstracted data from the medical records, and analysts cleaned and evaluated the data to provide information in this report.

Data Analysis and Statistical Testing

Data analysis was performed using the SAS™ System for Windows. Rates based on random samples are provided with confidence intervals, indicated by the plus/minus symbol (±), providing a measure of the precision of an estimated value. The interval represents the range of values believed to encompass the "true" rate value. Wider intervals indicate lower precision; narrow intervals indicate greater precision.

Statistical significance is the probability that a result is not likely to be due to chance alone. The possibility of a difference being due solely to chance is a probability value (*p*-value). A *p*-value of 0.05 was used to determine statistical significance. Throughout the report, the term "significant" is used only when referring to results that were evaluated using statistical testing.

Study Limitations

The well-child focused study included enrollees in FAMIS and SCHIP Medicaid Expansion for prior years. Enrollees in the FAMIS Plus program are included for the first time in the populations studied for 2007 service dates. Due to this change, comparisons across years are not appropriate for enrollees aged 15 months, 3 – 6 years, or 7 – 11 years. Although there were not significant differences between the three programs for enrollees aged 12 – 20 years, statistical testing of comparisons from 2006 to 2007 are not appropriate because the age group for prior years did not include enrollees who were aged 19 or 20 years.

[2] 2007 FAMIS managed care contract – Article II, Section G – 34 "Well Baby and Well-Child Care".

Study Questions

MPRO developed study questions for the well-child focused study using criteria and guidelines developed by the AAP and Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents. MPRO used these seven study questions to formulate data abstraction indicators and to report study results.

1. What proportion of enrollees who turned 15 months old during the review period had the following number of well-child visits with a PCP during their first 15 months of life: zero, one, two, three, four, five, and six or more?
2. What proportion of enrollees aged 3 – 6 years had at least one comprehensive well-child visit with a PCP during the measurement period?
3. What proportion of enrollees aged 7 – 11 years had at least one comprehensive well-child visit with a PCP during the measurement period?
4. What proportion of enrollees aged 12 – 20 years had at least one comprehensive well-child visit with a PCP during the measurement period?
5. What proportion of enrollees aged 3 – 6 years, 7 – 11 years, or 12 – 20 years received the well-child service components during the measurement period or what proportion of enrollees aged 15 months received the well-child service components between birth and 2 years?
6. Are enrollees receiving screening histories, measurements, sensory screening, and developmental assessments along with well-child service components at the AAP and "Bright Futures" program recommended age-specific intervals?
7. Are enrollees receiving hemoglobin, lead, tuberculosis (TB), and urinalysis screening at the AAP recommended age-specific intervals?

Reporting Results

NCQA publishes Quality Compass® using audited HEDIS® results from health organizations. Quality Compass® allows users to conduct competitor analysis, examine quality improvement, and benchmark plan performance. Benchmarks used in this report are from Quality Compass® for the Medicaid population for 2007 dates of service.[3] Non-statistical comparison is made to the national Medicaid HEDIS® average for 2008, which is based on 2007 service dates, referred to in the report as the "HEDIS® 2008 national Medicaid average."

This report compares 2007 rates to rates from prior year studies. Rates for 2005, 2006, and 2007 are based on a calendar year. The data sources for prior year information are:

- Information for State Fiscal Year 2003 (SFY2003) is from the Commonwealth of Virginia Clinical Study – FAMIS Well-Child Study for State Fiscal Year 2003;
- Information for 2004 is from the Commonwealth of Virginia Clinical Study – FAMIS for 2004;

[3] The source for data contained in this publication is Quality Compass® 2008 and is used with the permission of NCQA. Any analysis, interpretation, or conclusion based on these data is solely that of the authors, and NCQA specifically disclaims responsibility for any such analysis, interpretation, or conclusion. Quality Compass® is a registered trademark of NCQA.

- Information for 2005 is from MPRO's FAMIS Focused Study Report – Calendar Year 2005, published in April 2007 as well as the Commonwealth of Virginia Clinical Study Immunization Status at 24 Months and Prenatal Care Study – both produced by DMAS' previous External Quality Review Organization (EQRO); and
- Information for 2006 is from MPRO's Focused Quality Studies Report: Calendar Year 2006, published in June 2008.

Chapter 2 – Focused Study Results

Background

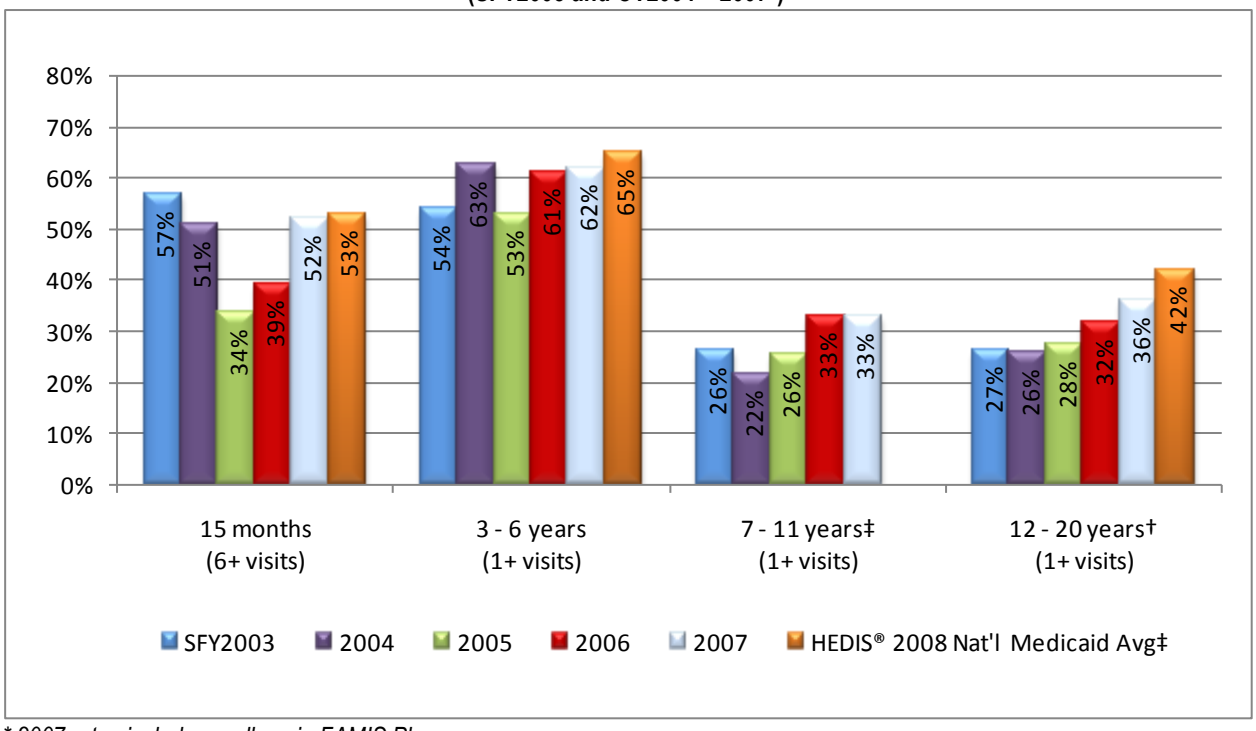
Well-child care seeks to prevent illness in children from infancy through puberty. Preventive care visits are important during the first year of life when infants experience major developmental changes in physical and emotional growth. School-aged children benefit from early detection of vision, speech, and language problems that can affect their school performance. Adolescents undergo many physical changes with the onset of puberty and are subject to intense peer-pressure that underscores the importance of anticipatory guidance.

This study of well-child service utilization by children in FAMIS, FAMIS Plus and SCHIP Medicaid Expansion programs assesses the extent to which enrollees obtain well-child visits in accordance with recommended age-specific guidelines. MPRO stratified the sample into four age groups: 15 months, 3 – 6 years, 7 – 11 years, and 12 – 20 years.

Focused Study Results

Figure 1 gives a general picture of well-child visit rates for the different age groups. It also shows longitudinal trends for the past five years. As noted in the study limitations outlined in Chapter 1, there have been changes over the years in measurement periods, age ranges, and populations; therefore, caution is advised when drawing conclusions from the data without noting those relevant caveats.

Figure 1. Overall Rate of Age-Appropriate Number of Well-Child Visits (SFY2003 and CY2004 – 2007*)



** 2007 rates include enrollees in FAMIS Plus program.*
† 12 – 18 years for SFY2003 through 2006.
‡ HEDIS® 2008 national Medicaid average not available for 7 – 11 age group.

The following pages present a discussion of the study results in detail, organized by study question.

Study Question # 1:

What proportion of enrollees who turned 15 months old during the review period had the following number of well-child visits with a PCP during their first 15 months of life: zero, one, two, three, four, five, and six or more?

Fifty-two percent of all enrollees received six or more well-child visits during their first 15 months of life. There were 17.3% with five visits and 11.5% with four visits summing to 80.9% of enrollees aged 15 months who received four or more well-child visits during their first 15 months of life. The AAP recommends six well-child visits by age one.[4] Rates for four, five, and six or more visits were at or above the HEDIS® 2008 national Medicaid average.

Table 6. Well-Child Care Visits for Enrollees Aged 15 Months
(FAMIS + FAMIS Plus – FAMIS Plus included only in 2007*)
(Service Dates are from Birth – 15 Months)

# Visits	SFY2003 (N=102)	2004 (N=165)	2005 (N=329)	2006 (N=280)	2007 (N=303)	HEDIS® 2008 Nat'l Average
6+	56.8%	50.9%	33.7% ± 5.1%† ‡	39.3% ± 5.7%	52.1% ± 3.6%	52.8%
5	17.7%	9.1%	14.0% ± 3.8%	22.1% ± 4.9%	17.3% ± 2.7%	17.3%
4	8.8%	16.4%	10.6% ± 3.3%	14.3% ± 4.1%	11.5% ± 2.3%	10.9%
3	3.9%	9.1%	13.1% ± 3.6%†	7.5% ± 3.1%	6.7% ± 1.8%	6.3%
2	6.9%	4.2%	10.9% ± 3.4% ‡	5.0% ± 2.6%	3.6% ± 1.3%	4.0%
1	2.9%	5.5%	7.0% ± 2.8%	3.9% ± 2.3%	2.9% ± 1.2%	3.3%
0	2.9%	4.8%	10.6% ± 3.3%†	7.9% ± 3.2%	5.9% ± 1.7%	5.5%

** Rates are for FAMIS + FAMIS Plus enrollees only; SCHIP Medicaid Expansion is limited to enrollees aged 6 – 19 years.*
†p value < .05; statistically significant difference among three years and between SFY2003 and 2005.
‡p value < .05; statistically significant difference among three years and between 2004 and 2005.
Statistical Testing: The chi-squared test indicated that for zero visits (p=0.028), two visits (p=0.012), three visits (p=0.019), five visits (p=0.012) and six or more visits (p<0.000), there were overall significant differences in rates among 2003 through 2006.
Note: numbers may not add to 100% due to rounding.

MCO rates were significantly higher than FFS rates for six or more visits and significantly lower (favorable) than FFS rates for three, one, and zero well-child visits by age 15 months. The 2007 rate for six or more well-child visits by age 15 months was 12.4 percentage points lower for enrollees in FFS than for those in managed care.

[4] Recommendations for Preventive Pediatric Health Care; Committee on Practice and Ambulatory Medicine and Bright Futures Steering Committee, *Pediatrics* 2007; 120: 1376.

Table 7 displays the rates for well-child care visits by delivery system.

Table 7. Well-Child Care Visits for Enrollees Aged 15 Months by Delivery System (FAMIS + FAMIS Plus*)

	MCO		FFS		PCCM	
# Visits	Num / Den	Rate	Num / Den	Rate	Num / Den	Rate
6+	172 / 297	57.9% ± 5.6%	136 / 299	45.5% ± 5.6%	81 / 151	53.6% ± 8%
5	59 / 297	19.9% ± 4.5%	51 / 299	17.1% ± 4.3%	19 / 151	12.6% ± 5.3%
4	30 / 297	10.1% ± 3.4%	41 / 299	13.7% ± 3.9%	15 / 151	9.9% ± 4.8%
3	13 / 297	4.4% ± 2.3%	26 / 299	8.7% ± 3.2%	11 / 151	7.3% ± 4.1%
2	11 / 297	3.7% ± 2.1%	8 / 299	2.7% ± 1.8%	8 / 151	5.3% ± 3.6%
1	4 / 297	1.3% ± 1.3%	13 / 299	4.3% ± 2.3%	5 / 151	3.3% ± 2.9%
0	8 / 297	2.7% ± 1.8%	24 / 299	8% ± 3.1%	12 / 151	7.9% ± 4.3%

** Rates are for FAMIS + FAMIS Plus enrollees only; SCHIP Medicaid Expansion is limited to enrollees aged 6 – 19 years.*
Note: numbers may not add to 100% due to rounding.

A comparison of rates for FAMIS and FAMIS Plus is provided in Table 11. Rates were similar between the two programs.

Table 8. Well-Child Care Visits for Enrollees Aged 15 Months by Program (Service Dates are from Birth – 15 Months)

# Visits	FAMIS Num / Den	FAMIS Rate	FAMIS Plus Num / Den	FAMIS Plus Rate
6+	161 / 303	53.1% ± 5.6%	228 / 444	51.4% ± 4.6%
5	57 / 303	18.8% ± 4.4%	72 / 444	16.2% ± 3.4%
4	33 / 303	10.9% ± 3.5%	53 / 444	11.9% ± 3%
3	18 / 303	5.9% ± 2.7%	32 / 444	7.2% ± 2.4%
2	7 / 303	2.3% ± 1.7%	20 / 444	4.5% ± 1.9%
1	7 / 303	2.3% ± 1.7%	15 / 444	3.4% ± 1.7%
0	20 / 303	6.6% ± 2.8%	24 / 444	5.4% ± 2.1%

Note: numbers may not add to 100% due to rounding.

Study Question # 2:

What proportion of enrollees aged 3 – 6 years had at least one comprehensive well-child visit with a PCP during the measurement period?

The rate for combined delivery systems of 61.5% was below the HEDIS® 2008 national Medicaid average of 65.3%. Rates by delivery system for enrollees aged 3 – 6 years varied from 2006 to 2007, but differences were not significant. There were statistically significant differences in well-child care visit rates for enrollees aged 3 – 6 years between the MCO and FFS delivery systems, as well as the FFS and PCCM delivery systems. Rates for enrollees in MCO and PCCM delivery systems were significantly higher than for enrollees in FFS. The difference in MCO and PCCM rates for 2007 was not significant. Table 9 below provides the details.

Table 9. Well-Child Care Visits for Enrollees Aged 3 – 6 Years *
(FAMIS + SCHIP Medicaid Expansion + FAMIS Plus – FAMIS Plus included only in 2007)

	Rate						
Delivery System	SFY2003 (N=271) †	2004 (N=325) †	2005 (N=213) †	2006 (N=438) †	2007 (N=999)	HEDIS® 2008 Nat'l Average	2007 Num / Den
MCO	59.1%	65.6%	53.6% ± 6.8%	63.5% ± 6.6%	67.2% ± 4.6%	NA	270 / 402
FFS	48.5%	58.6%	51.1% ± 7.2%	57.1% ± 6.8%	52.8% ± 5.2%	NA	187 / 354
PCCM	*(not available)*	63.8%	58.5% ± 15.3%	65.7% ± 11.2%	64.6% ± 6%	NA	157 / 243
Total	**53.9%**	**62.5%**	**53.0% ± 4.7%**	**61.1% ± 4.4%**	**61.5% ± 3%**	**65.3%**	**614 / 999**

** Rates are for FAMIS + FAMIS Plus enrollees aged 3 – 6 years and 6 year old SCHIP Medicaid Expansion enrollees; SCHIP Medicaid Expansion is limited to enrollees aged 6 – 19 years.*

†N represents total denominator; denominators by delivery system are not available for prior years.

Statistical Testing: There is a statistically significant difference (p = 0.012) in overall rates among 2003 through 2006.

Rates for comprehensive well-child visits for enrollees aged 3 – 6 years were calculated by focused study population with results as shown in Table 10. The 2007 FAMIS and FAMIS Plus rates were both significantly higher than the SCHIP Medicaid Expansion rate. There was no significant difference between rates for FAMIS and FAMIS Plus; however, significant differences were found between FAMIS and SCHIP and FAMIS Plus and SCHIP.

Table 10. Well-Child Care Visits for Enrollees Aged 3 – 6 Years by Population*

Focused Study Population	Numerator / Denominator			Rate		
	2005	2006	2007	2005	2006	2007
FAMIS	200 / 359	257 / 386	252 / 398	55.7% ± 5.1%	66.6% ± 4.7%	63.3% ± 4.7%
FAMIS Plus	(not available)	(not available)	316 / 483	(not available)	(not available)	65.4% ± 4.2%
FAMIS and FAMIS Plus	(not available)	(not available)	568 / 881	(not available)	(not available)	64.5% ± 3.9%
SCHIP Medicaid Expansion	32 / 79	38 / 97	46 / 118	40.5% ± 10.9%	39.2% ± 9.8%	39% ± 8.8%

** Rates are for FAMIS + FAMIS Plus enrollees aged 3 – 6 years and 6 year old SCHIP Medicaid Expansion enrollees; SCHIP Medicaid Expansion is limited to enrollees aged 6 – 19 years.*

Study Question # 3:

What proportion of enrollees aged 7 – 11 years had at least one comprehensive well-child visit with a PCP during the measurement period?

There were 33.4% of enrollees aged 7 – 11 years who had at least one comprehensive well-child visit with a PCP during the measurement year as shown in Table 11. There were statistically significant differences between rates for enrollees in the MCO delivery system (38.1%) compared to the 31.5% and 30.1% in the FFS and PCCM delivery systems, respectively.

Table 11. Well-Child Visits for Enrollees Aged 7 – 11 Years
(FAMIS + SCHIP Medicaid Expansion + FAMIS Plus – FAMIS Plus included only in 2007)

	Visit Rate					
Delivery System	SFY2003 (N=271) *	2004 (N=806) *	2005 (N=907) *	2006 (N=921) *	2007 (N=1,394)	2007 Num/Den
MCO	24.8%	28.7%	31.1% ± 5.1%	40.4% ± 5.4%	38.1% ± 4.3%	184 / 483
FFS	27.6%	18.3%	23.6% ± 4.6%	32.9% ± 5.1%	31.5% ± 4.1%	152 / 483
PCCM	*(not available)*	18.3%	20.9% ± 4.9%	24.9% ± 5.1%	30.1% ± 4.3%	129 / 428
Total	**26.2%**	**21.8%**	**25.5% ± 2.8%**	**33.1% ± 3.0%**	**33.4% ± 2.5%**	**465 / 1,394**

** N represents total denominator; denominators by delivery system are not available for years prior to 2005.*

Although an approximation of HEDIS® specifications for *Adolescent Well Care Visits* was used to calculate the rates for enrollees aged 7 – 11 years, the visit rate for this age range is not a reported HEDIS® measure; therefore, there is no benchmark available from Quality Compass®.

Rates for comprehensive well-child visits for enrollees aged 7 – 11 years were calculated by focused study population with results as shown in Table 12. A comparison of FAMIS to FAMIS Plus showed no significant differences for 2007. Rates for SCHIP Medicaid Expansion were significantly higher in 2007 than rates for the FAMIS or FAMIS Plus populations.

Table 12. Well-Child Care Visits for Enrollees Aged 7 – 11 Years by Population

Focused Study Population	Numerator / Denominator			Rate		
	2005	2006	2007	2005	2006	2007
FAMIS	105 / 424	173 / 438	138 / 428	24.8% ± 4.1%	39.5% ± 4.6%	32.2% ± 4.4%
FAMIS Plus	(not available)	(not available)	142 / 483	(not available)	(not available)	29.4% ± 4.1%
FAMIS and FAMIS Plus	(not available)	(not available)	280 / 911	(not available)	(not available)	30.7% ± 5.4%
SCHIP Medicaid Expansion	126 / 483	132 / 483	185 / 483	26.1% ± 3.9%	27.3% ± 4.0%	38.3% ± 4.3%

Study Question # 4:

What proportion of enrollees aged 12 – 20 years had at least one comprehensive well care visit with a PCP during the measurement period?

The overall rate for this age range at 35.7% was less than the HEDIS® 2008 national Medicaid average of 42.1%. MPRO used the HEDIS® specifications for *Adolescent Well Care Visits* to calculate the rates of visits for enrollees aged 12 – 20 years. HEDIS® uses enrollees aged 12 – 21 years in its measure; therefore, the benchmark rate for the *exact* age range used in the Virginia focused study is not available.

Rates for comprehensive well care visits for enrollees aged 12 – 20 years were compared from year to year and between delivery systems as shown in Table 13 below. There were significant differences noted between rates for enrollees in the MCO delivery system compared to FFS and PCCM with the MCO rate of 41.8% outpacing the others.

Table 13. Well-Child Care Visits for Enrollees Aged 12 – 20 Years*
(FAMIS + SCHIP Medicaid Expansion + FAMIS Plus – FAMIS Plus included only in 2007)

Delivery System	SFY2003 (N=271)	2004 (N=808)	2005 (N=966)	2006 (N=966)	2007 (N=1,449)	HEDIS® 2008 Nat'l Average ††	2007 Num / Den
MCO	29.9%	32.9%	32.3% ± 5.1%	36.6% ± 5.3%	41.8% ± 4.4%	NA	202 / 483
FFS	23.1%	21.7%	27.6% ± 4.9%	28.6% ± 4.9%	32.3% ± 4.2%	NA	156 / 483
PCCM	*Unavailable*	23.5%	22.7% ± 4.6%	29.8% ± 5.0%	33.1% ± 4.2%	NA	160 / 483
Total	**26.5%**	**25.9%**	**27.5% ± 2.8%** †	**31.7% ± 2.9%**	**35.7% ± 2.5%**	**42.1%**	**518 / 1,449**

N represents total denominator; denominators by delivery system are not available for years prior to 2005.
**Age range 12 – 18 for years prior to 2007.*
† *p value < .05; statistically significant difference between 2004 and 2005.*
†† HEDIS® reports for ages 12 – 21 years.

Rates for enrollees in FAMIS aged 12 – 20 years are shown by separate populations in Table 14. Rates were within one percentage point of 35% for all three focused study populations.

Table 14. Well-Child Care Visits for Enrollees Aged 12 – 20 Years by Population*

Focused Study Population	Num / Den			Rate		
	2005	2006	2007	2005	2006	2007
FAMIS	125 / 483	148 / 483	170 / 483	25.9% ± 3.9%	30.6% ± 4.1%	35.2% ± 4.3%
FAMIS Plus	(not available)	(not available)	176 / 483	(not available)	(not available)	36.4% ± 4.3%
FAMIS and FAMIS Plus	(not available)	(not available)	346 / 966	(not available)	(not available)	35.8% ± 5.1%
SCHIP Medicaid Expansion	141 / 483	158 / 483	172 / 483	29.2% ± 4.1%	32.7% ± 4.2%	35.6% ± 4.3%

**Age range 12 – 18 for years prior to 2007.*
Statistical Testing: There is no significant difference between populations.

Study Question # 5:

What proportion of enrollees aged 3 – 6 years, 7 – 11 years, or 12 – 20 years received the well-child service components during the measurement period or what proportion of enrollees aged 15 months received the well-child service components between birth and 2 years?

Well-Child visits with a primary care physician provide an important opportunity to screen children for appropriate development and address patient or parental concerns. Comprehensive well-child visits as reported in the previous tables were recorded by nurse abstractors only if the medical record included a note indicating a visit with a PCP, the date the well-child visit occurred, and evidence of all the following components:

- Developmental assessment;
- Physical exam; and
- Anticipatory guidance.

The rates shown in Table 15 provide a breakdown of these three components for each of the four age ranges by year.

Table 15. Well-Child Visit Components from Medical Record Abstraction 2005 – 2007
(FAMIS + SCHIP Medicaid Expansion + FAMIS Plus – FAMIS Plus included only in 2007)

Component	15 Months (Birth – 2 Years)			3 – 6 Years		
	2005 (N=158)	2006 (N=164)	2007 (N=573)	2005 (N=213)	2006 (N=246)	2007 (N=729)
Developmental Assessment	81.6%	90.2%	86.4%	58.2%	70.3%	63.1%
Physical Examination	79.7%	83.5%	88.0%	67.6%	69.5%	68.0%
Anticipatory Guidance	77.8%	88.4%	85.0%	52.6%	57.3%	61.0%
None of the above	16.5%	6.9%	11.2%	31.5%	20.7%	29.9%

Table 15. Well-Child Visit Components from Medical Record Abstraction 2005 – 2007 (continued)
(FAMIS + SCHIP Medicaid Expansion + FAMIS Plus – FAMIS Plus included only in 2007)

Component	7 – 11 Years			12 – 20 Years		
	2005 (N=388)	2006 (N=393)	2007 (N=932)	2005 (N=388)	2006 (N=404)	2007 (N=907)
Developmental Assessment	40.2%	53.2%	39.8%	53.4%	54.0%	45.6%
Physical Examination	54.1%	69.5%	42.5%	59.3%	51.0%	46.1%
Anticipatory Guidance	32.5%	34.6%	34.5%	38.9%	31.4%	40.4%
None of the above	42.8%	40.3%	53.6%	34.5%	37.9%	49.2%

The rates shown in Table 16 below provide the 2007 data on the well-child visit components by program. There were no significant differences between rates for the FAMIS and FAMIS Plus programs for any of the components for enrollees aged 15 months, 3 – 6 years or 12 – 20 years. Rates for FAMIS and FAMIS Plus were significantly different for each of the four components for enrollees aged 7 – 11 years. The FAMIS and FAMIS Plus rates for all four components were significantly higher than the results for the SCHIP Medicaid Expansion population for enrollees aged 3 – 6 years. Rates for FAMIS Plus enrollees 7 – 11 years old were significantly different than rates for the SCHIP Medicaid Expansion population.

Table 16. Well-Child Visit Components from Medical Record Abstraction by Program – 2007 (FAMIS, FAMIS Plus and SCHIP Medicaid Expansion*)

	15 Months (Birth – 2 Years)			3 – 6 Years			
Component	FAMIS (N=226)	FAMIS Plus (N=347)	FAMIS and FAMIS Plus (N=573)	FAMIS (N=302)	FAMIS Plus (N=347)	FAMIS and FAMIS Plus (N=649)	SCHIP Medicaid Expansion (N=80)
Developmental Assessment	88.5%	85.0%	86.4%	62.6%	68.6%	65.8%	41.3%
Physical Examination	90.3%	86.5%	88.0%	68.9%	71.8%	70.4%	48.8%
Anticipatory Guidance	87.2%	83.6%	85.0%	62.3%	64.8%	63.6%	40.0%
None of the above	9.3%	12.4%	11.2%	30.1%	25.1%	27.4%	50.0%

** SCHIP Medicaid Expansion Program is limited to children aged 6 – 19 years.*

Table 16. Well-Child Visit Components from Medical Record Abstraction by Program (continued) (FAMIS, FAMIS Plus and SCHIP Medicaid Expansion*)

	7-11 Years				12-20 Years			
Component	FAMIS (N=277)	FAMIS Plus (N=312)	FAMIS and FAMIS Plus (N=589)	SCHIP Medicaid Expansion (N=343)	FAMIS (N=311)	FAMIS Plus (N=291)	FAMIS and FAMIS Plus (N=602)	SCHIP Medicaid Expansion (N=305)
Developmental Assessment	43.0%	33.0%	37.7%	43.4%	43.1%	47.1%	45.0%	46.9%
Physical Examination	45.1%	37.5%	41.1%	44.9%	45.0%	46.0%	45.5%	47.2%
Anticipatory Guidance	35.4%	29.5%	32.3%	38.5%	37.9%	41.6%	39.7%	41.6%
None of the above	49.5%	59.6%	54.8%	51.6%	50.8%	49.8%	50.3%	46.9%

** SCHIP Medicaid Expansion Program is limited to children aged 6 – 19 years.*

Developmental Assessment

A developmental assessment evaluates a child's attainment of established milestones by age, such as the ability to recognize shapes, first words, or crawling. Examples of developmental achievements for adolescents include sexual development, responsibility for good health habits, and progression from concrete to abstract thinking.[5] Measurements of intellectual, psychosocial, and cognitive development might be included in developmental assessment, as well as speech and language formation. Medical record documentation may include a listing of milestones achieved, a checklist of tasks the child is able to perform, or a formal assessment tool. In 2007, developmental assessments were most often performed for enrollees aged 15 months and least often for children aged 7 – 11 years.

[5] Bright Futures. Guidelines for Health Supervision of Infants, Children, and Adolescents (2nd ed., rev 2000).

Physical Examination

At minimum, a child's physical examination includes inspection of the head, ears, eyes, nose, and throat; chest, abdomen, and extremities. Of the three well-child visit components, PCPs conducted physical exams most frequently, with the highest rates occurring for the youngest enrollees. Physical exam rates for the youngest age groups were seven and eight percentage points higher than anticipatory guidance rates for the same age groups.

Anticipatory Guidance

Anticipatory guidance focuses on health maintenance, safety, nutrition, and child development. Educational information assists in providing a safe environment for children and helping parents recognize normal progress or possible areas of concern in their child's development. Rates for anticipatory guidance varied by age with about 32% of enrollees aged 7 – 11 years receiving anticipatory guidance and 85% of enrollees aged 15 months receiving it.

Study Question # 6:

Are enrollees receiving screening histories, measurements, sensory screening, and developmental assessments along with well-child service components at the AAP and "Bright Futures" program recommended age-specific intervals?

The preventive care described by Bright Futures contributes to positive health outcomes through health promotion, anticipatory guidance, disease prevention, and early detection of disease. Preventive services promote positive child health outcomes and provide guidance to parents and children, including children and youth with special health care needs.[6] Rates for the elements listed in Table 17 provide information focused on the provision of screening and assessment services provided to enrollees in accordance with AAP and Bright Futures recommendations. Some of the elements apply only to selected age ranges or situations. For example, head circumference measurement is recommended from birth to approximately 24 months of age and cholesterol screening is recommended for enrollees aged 3 – 18 years. Pelvic examinations are recommended only for sexually active females, and screenings for sexually transmitted diseases (STDs) are recommended only for enrollees (male and female) who are sexually active.[7] A discussion of each element and results follows.

Table 17. Well-Child Screening and Assessment Elements
(FAMIS + SCHIP Medicaid Expansion + FAMIS Plus – FAMIS Plus included only in 2007)

Element	15 Months (Birth – 2 Years)			3 – 6 Years		
	2005 (N=158)	2006 (N=164)	2007 (N=573)	2005 (N=213)	2006 (N=246)	2007 (N=729)
Immunization review	89.2%	95.1%	88.3%	54.7%	69.1%	62.7%
Height	83.5%	93.3%	87.8%	61.5%	77.2%	71.2%
Weight	87.3%	95.1%	92.7%	74.6%	93.9%	88.8%
Head circumference	76.4%	89.0%	82.4%	NA	NA	NA
Blood pressure	NA	NA	NA	49.8%	66.3%	58.2%
Vision screening	39.2%	73.8%	71.6%	34.3%	53.9%	47.9%

[6] Hagan JF, Shaw JS, Duncan PM, eds. 2008. Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, Third Edition. Elk Grove Village, IL: American Academy of Pediatrics.
[7] Pelvic examination and STD screening is recommended for enrollees 11 years and older.

Element	15 Months (Birth – 2 Years)			3 – 6 Years		
	2005 (N=158)	2006 (N=164)	2007 (N=573)	2005 (N=213)	2006 (N=246)	2007 (N=729)
Hearing screening	36.7%	66.5%	69.1%	23.9%	49.2%	44.2%
Dental inspection	41.1%	65.9%	56.2%	32.4%	53.7%	44.3%
Nutritional assessment	74.1%	93.9%	81.8%	46.0%	71.5%	51.4%
Cholesterol screening	NA	NA	NA	3.3%	18.2%	9.7%
Pelvic exam	NA	NA	NA	NA	NA	NA
Screening for STDs	NA	NA	NA	NA	NA	NA

Table 17. Well-Child Screening and Assessment Elements (continued)
(FAMIS + SCHIP Medicaid Expansion + FAMIS Plus – FAMIS Plus included only in 2007)

Element	7 – 11 Years			12 – 20 Years		
	2005 (N=388)	2006 (N=393)	2007 (N=932)	2005 (N=388)	2006 (N=404)	2007 (N=907)
Immunization review	25.5%	44.8%	38.0%	37.0%	43.3%	42.2%
Height	45.6%	59.5%	51.7%	54.6%	61.6%	56.7%
Weight	70.6%	90.8%	81.5%	73.7%	91.3%	79.3%
Head circumference	NA	NA	NA	NA	NA	NA
Blood pressure	43.8%	63.1%	49.2%	61.6%	74.0%	64.8%
Vision screening	21.9%	38.4%	26.3%	24.5%	34.7%	26.8%
Hearing screening	14.7%	29.5%	23.4%	12.6%	26.2%	22.2%
Dental inspection	19.1%	36.1%	25.5%	21.6%	32.7%	25.5%
Nutritional assessment	30.4%	46.8%	32.6%	34.0%	45.1%	31.5%
Cholesterol screening	4.5%	14.6%	7.6%	7.6%	16.8%	11.6%
Pelvic exam	NA	NA	NA	NA	47.8% (n=23)	64.7% (n=51)
Screening for STDs	NA	NA	NA	NA	41.7% (n=72)	100.0% (n=51)

There were significant differences between rates for FAMIS and FAMIS Plus for five elements for the youngest enrollees: immunization review, head circumference, vision screening, hearing screening, and nutritional assessment. There were fewer differences for older enrollees. Rates for height measurement varied significantly for enrollees aged 3 – 6 and 7 – 11 years. FAMIS and FAMIS Plus rates for weight varied significantly for enrollees aged 7 – 11 and 12 – 20. The vision screening rate for FAMIS enrollees was significantly higher than the rate for FAMIS Plus enrollees who were aged 12 – 20 years.

The rates for enrollees in SCHIP Medicaid Expansion were significantly lower than FAMIS and FAMIS Plus for children aged 3 – 6 years, and comparable for children aged 7 -11 and 12 – 20 years, with the exception of immunization review, height, and blood pressure rates for FAMIS Plus enrollees aged 7 – 11 years. The FAMIS Plus rates for these three measures for enrollees aged 7 – 11 years were significantly lower than rates for the SCHIP Medicaid Expansion population.

Table 18 provides the data by program.

Table 18. Well-Child Screening and Assessment Elements by Program – 2007 (FAMIS, FAMIS Plus and SCHIP Medicaid Expansion*)

Element	15 Months (Birth – 2 Years)			3 – 6 Years			
	FAMIS (N=226)	FAMIS Plus (N=347)	FAMIS and FAMIS Plus (N=573)	FAMIS (N=302)	FAMIS Plus (N=347)	FAMIS and FAMIS Plus (N=649)	SCHIP Medicaid Expansion (N=80)
Immunization review	91.2%	86.5%	88.3%	62.3%	66.9%	64.7%	46.3%
Height	88.1%	87.6%	87.8%	69.9%	76.4%	73.3%	53.8%
Weight	92.5%	92.8%	92.7%	88.7%	90.2%	89.5%	82.5%
Head circumference	86.3%	79.8%	82.4%	0.0%	0.0%	0.0%	0.0%
Blood pressure	0.0%	0.0%	0.0%	57.6%	63.1%	60.6%	38.8%
Vision screening	75.2%	69.2%	71.6%	48.3%	51.3%	49.9%	31.3%
Hearing screening	73.5%	66.3%	69.1%	44.0%	49.0%	46.7%	23.8%
Dental inspection	57.5%	55.3%	56.2%	45.0%	47.3%	46.2%	28.8%
Nutritional assessment	85.8%	79.3%	81.8%	52.6%	54.8%	53.8%	32.5%
Cholesterol screening	0.0%	0.0%	0.0%	10.9%	9.2%	10.0%	7.5%
Pelvic exam	NA	NA	NA	NA	NA	NA	NA
Screening for STDs	NA	NA	NA	NA	NA	NA	NA

** SCHIP Medicaid Expansion Program is limited to children aged 6 – 19 years.*

Table 18. Well-Child Screening and Assessment Elements by Program – 2007 (continued) (FAMIS, FAMIS Plus and SCHIP Medicaid Expansion)

Element	7-11 Years				12-20 Years			
	FAMIS (N=277)	FAMIS Plus (N=312)	FAMIS and FAMIS Plus (N=589)	SCHIP Medicaid Expansion (N=(343)	FAMIS (N=311)	FAMIS Plus (N=291)	FAMIS and FAMIS Plus (N=602)	SCHIP Medicaid Expansion (N=305)
Immunization review	38.6%	33.7%	36.0%	41.4%	44.7%	42.3%	43.5%	39.7%
Height	52.7%	46.8%	49.6%	55.4%	58.2%	54.6%	56.5%	57.0%
Weight	87.0%	76.9%	81.7%	81.3%	81.0%	75.6%	78.4%	81.0%
Head circumference	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Blood pressure	50.9%	44.6%	47.5%	52.2%	63.7%	64.3%	64.0%	66.6%
Vision screening	24.9%	25.0%	25.0%	28.6%	28.3%	23.0%	25.7%	28.9%
Hearing screening	22.4%	23.1%	22.8%	24.5%	23.8%	21.3%	22.6%	21.3%
Dental inspection	27.4%	23.7%	25.5%	25.7%	25.7%	25.8%	25.7%	24.9%
Nutritional assessment	31.4%	33.0%	32.3%	33.2%	28.3%	32.3%	30.2%	34.1%
Cholesterol screening	7.9%	7.4%	7.6%	7.6%	10.9%	11.0%	11.0%	12.8%
Pelvic exam	NA	NA	NA	NA	28.6% (n=7)	75.0% (n=28)	65.7% (n=35)	62.5% (n=16)
Screening for STDs	NA	NA	NA	NA	100.0% (n=7)	100.0% (n=28)	100.0% (n=35)	100.0% (n=16)

** SCHIP Medicaid Expansion Program is limited to children aged 6 – 19 years.*

The following narrative provides additional information about the well-child screening and assessment components and comments on rates calculated for the combined FAMIS and FAMIS Plus programs.

Immunization Review

Most childhood vaccines are highly effective in preventing disease and are even more effective in reducing disease severity. Millions of children have been protected from serious illnesses such as polio, whooping cough, measles, tetanus, and diphtheria because parents have had their children immunized.[8] PCPs reviewed immunization status, such as verifying that the enrollee was up to date on all needed vaccines, at higher rates for the younger age groups than for enrollees aged 7 – 11 and 12 – 20 years. Immunization review rates were highest for enrollees aged 15 months at 88.3% for 2007.

Height and Weight Assessment

Height measurements, when compared with age-specific standards, provide useful information of a child's growth and suggest additional evaluation when measurements deviate from the acceptable range. Weight measurements during childhood provide growth and development information when compared with standards. Weight measurement findings outside the acceptable standard may suggest that further clinical evaluation or planned interventions are needed to assist an enrollee in maintaining optimal health. Rates for weight measurement ranked first or second among age groups and were between about 55% and 95% depending on the age group and program. Height measurement was not conducted as frequently; although, rates were about 20 percentage points higher for the youngest two age groups than for the older enrollees.

Blood Pressure Screening

In children and adolescents, primary or essential hypertension is diagnosed when persistently elevated blood pressure cannot be explained by any underlying organic cause. Children and adolescents with frequent blood pressure readings between the 90th and 95th percentiles for their age, sex, and height (unless tall for their age) are at risk for developing hypertension.[9] The AAP periodicity schedule recommends annual blood pressure measurement for children aged 3 years and older. Blood pressure readings higher or lower than standards accepted by AAP may suggest hyper- or hypotensive conditions. Rates for blood pressure assessment were between about 50% and 65% for the applicable age ranges.

Vision Screening

Vision screening for infants includes, at a minimum, eye examination, and observation of responses to visual stimuli. Providers often screen visual acuity in infants by observing whether an infant's eyes "track" an object moved across his or her field of vision. Many vision problems begin well before children reach school age; therefore, it is ideal for children to receive a vision screening exam before age five. Early recognition of a vision-related disease is likely to result in more effective treatment options that can be sight saving or even life saving.[10] Vision screening rates for children aged 15 months (71.6%) and 3 – 6 years (49.9%) were substantially higher than rates for the two older age ranges, but still ranked near the bottom for relative frequency among elements.

[8] Immunizations: What You Need to Know. Copyright © 2003 American Academy of Pediatrics, Updated 9/03.
[9] Green, M. Op. cit.
[10] National Institutes of Health. Healthy Vision 2010 Examinations and Preventions. Objective 28-2.

Hearing Screening

Identifying hearing difficulties at a young age allows for early interventions and reduced potential for developmental delays related to hearing deficits. Documentation in the medical record of any age-appropriate subjective or objective hearing test by the health care provider was considered acceptable for this study. The Healthy People 2010 target for hearing screening is 90%.[11] Like vision screening, hearing screening for children aged 15 months and 3 – 6 years was substantially higher than screening for the two older age ranges. Rates for the two younger age groups were 69.1% and 46.7%, but only about 22% for the two older age groups.

Nutritional Assessment

Nutritional assessment is an important component of well-child care. The health care provider should be aware of an enrollee's nutritional intake and relate this information to other findings from the overall assessment. For a nutritional assessment, the health care provider reviews the child's food intake and eating habits. The assessment considers the appropriateness of nutritional choices and possible need for nutritional supplements. The rate for nutritional assessments declined as age increased, moving from 81.8% for enrollees aged 15 months down to 30.2% for enrollees aged 12 – 20 years.

Cholesterol Screening

The AAP recommends cholesterol screening for children whose parents or grandparents:

- Underwent coronary angiography and were found to have coronary artery disease under the age of 55 years;
- Had a documented myocardial infarction, angina pectoris, peripheral vascular disease, cerebral vascular disease, or sudden cardiac death;
- Have an elevated blood cholesterol of greater than 240 mg/dL; or
- Have an unobtainable history, particularly those with other risk factors, such as obesity, smoking, and poor dietary habits.

PCPs are expected to screen high-risk patients for cholesterol at 24 months and at ages 5, 6, 8, and 10 years; routine screening should begin at 3 years of age. By age 4, children should be screened for total cholesterol and high-density cholesterol.[12] Cholesterol screening was relatively low with rates between 7.6% and 11.0% for the focused study population.

Pelvic Examination

A pelvic examination aids the health professional's evaluation of the size and position of the vagina, cervix, uterus, fallopian tubes, and ovaries to detect certain cancers in their early stages, infections, STDs, or other reproductive system problems. The rate for 2007 was 65.7%.

STD Screening

STDs result from infections usually spread through sexual activity, contact with body fluids, or passed from a mother to her newborn baby. A national study of sexually active young women found that one in four was infected with at least one of the four most common STDs. Nearly

[11] Ibid.
[12] DC Department of Health, Division of Human Services. Health Check Manual (formerly EPSDT).

two-thirds of all STDs occur in people under the age of 25.[13] Health professionals can help adolescents identify and understand the risks and consequences of their sexual behaviors and support the development of healthy sexuality through risk assessment, screening, and counseling. Screening for STDs was 100% for 2007.

Study Question # 7:

Are enrollees receiving hemoglobin, lead, TB, and urinalysis screening at the AAP recommended age-specific intervals?

Diagnostic laboratory tests are important for disease screening. For example, hematocrit or hemoglobin blood tests measure iron deficiency anemia. Anemia can result in developmental delays and behavioral disturbances that may persist past school age unless treated. Rates for the five screenings recommended by the AAP are shown in Table 19.

Table 19. Summary of Select Screening Elements
(FAMIS + SCHIP Medicaid Expansion + FAMIS Plus – FAMIS Plus included only in 2007)

Element	15 Months (Birth – 2 Years)			3 – 6 Years		
	2005 (N=158)	2006 (N=164)	2007 (N=573)	2005 (N=213)	2006 (N=246)	2007 (N=729)
Tuberculin screening	16.6%	18.9%	16.2%	12.2%	19.9%	14.3%
Verbal lead screening	NA	39.6%	27.4%	NA	21.6%	13.2%
Blood lead level testing	31.3%	37.2%	36.6%	12.9%	17.9%	17.8%
Hematocrit or hemoglobin blood test	43.1%	55.5%	49.7%	34.8%	43.1%	41.7%
Urinalysis	9.6%	7.9%	7.9%	36.7%	44.3%	34.2%

Table 19. Summary of Select Screening Elements (continued)
(FAMIS + SCHIP Medicaid Expansion + FAMIS Plus – FAMIS Plus included only in 2007)

Element	7 – 11 Years			12 – 20 Years		
	2005 (N=388)	2006 (N=393)	2007 (N=932)	2005 (N=388)	2006 (N=404)	2007 (N=907)
Tuberculin screening	6.0%	11.7%	7.7%	6.3%	9.4%	7.4%
Verbal lead screening	NA	NA	NA	NA	NA	NA
Blood lead level testing	NA	NA	NA	NA	NA	NA
Hematocrit or hemoglobin blood test	25.1%	29.3%	20.5%	31.8%	32.4%	29.0%
Urinalysis	28.8%	32.6%	23.0%	33.1%	32.4%	26.6%

Rates for enrollees in FAMIS Plus for verbal lead screening and blood lead level testing were significantly higher than for FAMIS enrollees aged 3 – 6 years. The rates for enrollees in SCHIP Medicaid Expansion were lower than FAMIS and FAMIS Plus for children aged 3 – 6 years, and slightly higher for children aged 7 – 11 years. The differences were significant for all elements for the enrollees aged 3 – 6 except tuberculin screening. Comparison of the results for urinalysis testing for enrollees aged 12 – 20 years showed the FAMIS Plus rate to be significantly higher than the rate for SCHIP Medicaid Expansion. Results for other elements were similar among the populations.

Table 20 provides a summary of the rates for each of the screening elements by program. Rates for enrollees in FAMIS Plus for verbal lead screening and blood lead level testing were significantly higher than for FAMIS enrollees aged 3 – 6 years. The rates for enrollees in SCHIP Medicaid Expansion were lower than FAMIS and FAMIS Plus for children aged 3 – 6 years, and slightly higher for children aged 7 – 11 years. The differences were significant for all elements

[13] Van Houton, Susan. Prevention: Revolution Health. February 9, 2007.

for the enrollees aged 3 – 6 except tuberculin screening. Comparison of the results for urinalysis testing for enrollees aged 12 – 20 years showed the FAMIS Plus rate to be significantly higher than the rate for SCHIP Medicaid Expansion. Results for other elements were similar among the populations.

Table 20. Summary of Select Screening Elements by Program– 2007 (FAMIS, FAMIS Plus and SCHIP Medicaid Expansion*)

Element	15 Months (Birth – 2 Years)			3 – 6 Years			
	FAMIS (N=226)	FAMIS Plus (N=347)	FAMIS and FAMIS Plus (N=573)	FAMIS (N=302)	FAMIS Plus (N=347)	FAMIS and FAMIS Plus (N=649)	SCHIP Medicaid Expansion (N=80)
Tuberculin screening	16.4%	16.1%	16.2%	16.2%	13.3%	14.6%	11.3%
Verbal lead screening	28.8%	26.5%	27.4%	10.9%	17.0%	14.2%	5.0%
Blood lead level testing	38.1%	35.7%	36.6%	16.9%	22.2%	19.7%	2.5%
Hematocrit or hemoglobin blood test	51.8%	48.4%	49.7%	44.7%	44.7%	44.7%	17.5%
Urinalysis	8.0%	7.8%	7.9%	36.1%	35.2%	35.6%	22.5%

**SCHIP Medicaid Expansion Program is limited to children aged 6 – 19 years.*

Table 20. Summary of Select Screening Elements by Program– 2007 (continued) (FAMIS, FAMIS Plus and SCHIP Medicaid Expansion*)

Element	7 – 11 Years				12 – 20 Years			
	FAMIS (N=277)	FAMIS Plus (N=312)	FAMIS and FAMIS Plus (N=589)	SCHIP Medicaid Expansion (N=343)	FAMIS (N=311)	FAMIS Plus (N=291)	FAMIS and FAMIS Plus (N=602)	SCHIP Medicaid Expansion (N=305)
Tuberculin screening	7.2%	6.4%	6.8%	9.3%	8.7%	7.2%	8.0%	6.2%
Verbal lead screening	NA	NA	NA	NA	NA	NA	NA	NA
Blood lead level testing	NA	NA	NA	NA	NA	NA	NA	NA
Hematocrit or hemoglobin blood test	19.9%	19.9%	19.9%	21.6%	26.0%	32.6%	29.2%	28.5%
Urinalysis	23.8%	20.8%	22.2%	24.2%	26.0%	29.9%	27.9%	23.9%

** SCHIP Medicaid Expansion Program is limited to children aged 6 – 19 years.*

Tuberculin Screening

A screening test for tuberculosis (TB) infection or disease should be performed for infants and children with identified high-risk factors. Risk assessment focuses on children exposed to any relative, playmate, or other acquaintance with active or inactive TB. Screening rates decreased as age increased with the youngest age group rate at 16.2% and the oldest at 8%.

Blood Lead Screening and Testing

Data were abstracted from medical records to assess if enrollees received a verbal assessment for lead poisoning risk during 2007. A verbal lead risk assessment includes, at a minimum, the following types of questions:

1. Does the child live in (or regularly visit) a house built before 1960 with peeling or chipping paint?
2. Does the child live in (or regularly visit) a house built before 1960 with recent, ongoing or planned renovation or remodeling?
3. Does the child or his playmates currently have or had lead poisoning in the past?

4. Does the child frequently come in contact with an adult who works with lead? Examples include construction, welding, pottery or other trades practiced in their community.
5. Does the child receive folk remedies that may contain lead?

The AAP recommends blood lead level testing for all children between 9 and 12 months and again at 24 months. It is also recommended that children aged 26 – 72 months receive a blood lead level test unless they are first assessed as low risk. The screening blood lead test may be performed by either a capillary sample (fingerstick) or venous sample. MCOs are required to cover blood lead testing as part of well-child care services, in accordance with EPSDT periodicity schedules and guidelines.[14] The blood lead level testing rate reported in this study is the percentage of enrollees who received at least one blood lead level test during 2007. Verbal and blood lead screening rates were highest for enrollees aged 15 months at 27.4% and 36.6%, respectively. Enrollees 3 – 6 years had rates at 14.2% and 19.7% for the verbal lead screening and blood lead level testing, respectively.

Hematocrit or Hemoglobin Blood Test

According to Bright Futures guidelines, the incidence of iron deficiency anemia is highest among infants and children aged 6 months to 3 years because of the increased iron requirements during periods of rapid growth. Hematocrit or hemoglobin blood testing rates were between 40% and 50% for the two younger age groups, but about 20% and 30%, respectively, for enrollees aged 7 – 11 and 12 – 20 years.

Urinalysis

Urinalysis can help proactively identify abnormalities such as glucose, protein, red and white blood cells, and bacteria in the urine. Urinalysis is also a preliminary screening tool for detecting the presence of gonorrhea or chlamydia in asymptomatic teens. Rates were highest for enrollees aged 3 – 6 years at 35.6%, followed by rates for enrollees aged 12 – 20 years at 27.9%.

[14] Medallion II MCO Contract Article II, Section G.8.a.iv(d).

Summary and Conclusions

The purpose of this study was to evaluate the frequency and content of well-child visits by age group. Well-child visits are one of the best methods to detect physical, developmental, behavioral, and emotional problems proactively. The exams also present an opportunity for physicians to offer guidance and counseling to parents.

Summary

Table 21 displays the well-child visit rates for each age group by delivery system in 2007. The single constant across age groups for the well-child visit rates was that enrollees in the MCO program had rates that were significantly higher than rates for enrollees in FFS.

Table 21. Well-Child Care Visits for Enrollees in Each Age Group by Delivery System (FAMIS + SCHIP Medicaid Expansion + FAMIS Plus)

Delivery System	15 Months* (Birth – 15 months)	3 – 6 Years	7 – 11 Years	12 – 20 Years
MCO	57.9% ± 5.6%	67.2% ± 4.6%	38.1% ± 4.3%	41.8% ± 4.4%
FFS	45.5% ± 5.6%	52.8% ± 5.2%	31.5% ± 4.1%	32.3% ± 4.2%
PCCM	53.6% ± 8%	64.6% ± 6%	30.1% ± 4.3%	33.1% ± 4.2%
Total	**52.1% ± 3.6%**	**61.5% ± 3%**	**33.4% ± 2.5%**	**35.7% ± 2.5%**

** Indicates rates for 6 or more well visits per year*

The data in Table 22 below provides a summary of the age-specific results for each of the programs.

Table 22. Well Child Care Visits by Age and Program

Age Group	FAMIS	FAMIS Plus	FAMIS and FAMIS Plus	SCHIP Medicaid Expansion
15 months (6 + visits)	53.1% ± 5.6%	51.4% ± 4.6%	52.1% ± 3.6%	NA
3-6 years	63.3% ± 4.7%	65.4% ± 4.2%	64.5% ± 3.9%	39% ± 8.8%
7-11 years	32.2% ± 4.4%	29.4% ± 4.1%	30.7% ± 5.4%	38.3% ± 4.3%
12-20 years	35.2% ± 4.3%	36.4% ± 4.3%	35.8% ± 5.1%	35.6% ± 4.3%

Children aged 15 months received the appropriate number of visits (six) in 52.1% of cases, a rate just below the HEDIS® 2008 national Medicaid average. Enrollees aged 3 – 6 years had the highest visit rate at 61.5%, near the HEDIS® 2008 national Medicaid average.

The three required components of a comprehensive well-child visit (physical exam, developmental assessment, and anticipatory guidance) varied substantially across age ranges, but physical exam was the most frequent for any age group and anticipatory the least frequent for any age group.

The most frequently performed screening and assessment elements across age ranges were cholesterol screening and weight measurement. Height measurement, blood pressure assessment, and immunization review were ranked in the top five elements. Hearing and dental assessment were conducted the least frequently.

Table 23 provides a summary of the results of each of the seven questions posed in this study.

Table 23. Summary of Well-Child Study Questions and Results

	Study Question	Summary of 2007 Results
1.	What proportion of enrollees who turned 15 months old during the review period had the following number of well-child visits with a PCP during their first 15 months of life: zero, one, two, three, four, five, six, or more?	▪ Fifty-three percent of enrollees in FAMIS received six well-child visits during their first 15 months of life. There were statistically significant differences between rates for MCO and FFS delivery systems for six visits. ▪ More than 80% of FAMIS enrollees aged 15 months received four or more well-child visits during their first 15 months of life. ▪ Rates for enrollees in FAMIS Plus for six well-child visits during the first 15 months of life were just below the HEDIS® 2008 national Medicaid average. ▪ There were no significant differences between FAMIS and FAMIS Plus for well-child visit rates for enrollees aged 15 months.
2.	What proportion of enrollees aged 3 – 6 years had at least one comprehensive well-child visit with a PCP during the measurement period?	▪ Rates for enrollees in MCO and PCCM delivery systems were significantly higher than FFS. The combined rate of 61.5% was below the HEDIS® 2008 national Medicaid average of 65.3%. ▪ Rates for FAMIS at 63.3% were similar to rates for FAMIS Plus at 65.4%.
3.	What proportion of enrollees aged 7 – 11 years had at least one comprehensive well-child visit with a PCP during the measurement period?	▪ Approximately 33.4% of enrollees aged 7 – 11 years had at least one well-child visit. MCO rates were significantly higher than FFS and PCCM rates. ▪ Rates for FAMIS and FAMIS Plus were similar at 32.2% and 29.4%, respectively.
4.	What proportion of enrollees aged 12 – 20 years had at least one comprehensive well care visit with a PCP during the measurement period?	▪ The MCO rate of 41.8% was significantly higher than FFS and PCCM rates. The overall rate of 35.7% was less than the HEDIS® 2008 national Medicaid average of 42.1%. ▪ Rates for FAMIS (35.2%) and FAMIS Plus (36.4%) were similar.
5.	What proportion of enrollees aged 3 – 6 years, 7 – 11 years, or 12 – 20 years received the well-child service components during the measurement period or what proportion of enrollees aged 15 months received the well-child service components between birth and 2 years?	▪ Developmental assessments were most often performed for enrollees aged 15 months and least often for children aged 7 – 11 years. ▪ Physical exam rates were the highest among the three required components. ▪ Rates for anticipatory guidance varied substantially by age with about 32% of enrollees aged 7 – 11 receiving anticipatory guidance and 85% of enrollees aged 15 months. ▪ Rates for FAMIS and FAMIS Plus were similar for all components for all groups except for enrollees aged 7 – 11 years where there were significant differences between the two populations for each component.
6.	Are enrollees receiving screening histories, measurements, sensory screening, and developmental assessments along with well-child service components at the AAP and "Bright Futures" program recommended age-specific intervals?	▪ Rates for the different elements vary substantially from single digits to rates above 90% depending on the age group and the element itself. ▪ Rates for height and weight measurement were the highest among age ranges. ▪ Dental and hearing screening rates were the lowest among age ranges. ▪ Rates for FAMIS were significantly higher than rates for FAMIS Plus enrollees for several measures for the youngest age groups. There were fewer differences between the populations for the older children.
7.	Are enrollees receiving hemoglobin, lead, TB, and urinalysis screening at the AAP recommended age-specific intervals?	▪ Tuberculin screening rates decreased as age increased with the youngest age group rate at 16.2% and the oldest at 8%. ▪ Verbal and blood lead screening rates were highest for enrollees aged 15 months at 27.4% and 36.6%, respectively. Rates for FAMIS Plus were significantly higher than rates for FAMIS enrollees for this indicator. ▪ Hematocrit or hemoglobin blood testing rates were between 40% and 50% for the two younger age groups, but 20% and 30%, respectively, for enrollees aged 7 – 11 and 12 – 20 years. ▪ Urinalysis rates were highest for enrollees aged 3 – 6 years at 35.6%, followed by rates for enrollees aged 12 – 20 years at 27.9%.

Conclusion

Overall, the well-child visit rates increased from 2005 to 2007. The enrollees in MCOs received well-child visits at significantly higher rates than the enrollees in FFS. Rates for enrollees in FAMIS were usually higher, sometimes significantly so, than for rates for FAMIS Plus enrollees. Verbal lead screening and blood lead level testing rates were significantly higher for enrollees in FAMIS Plus. Although the combined well-child visit rates are continuing to improve, there remain opportunities for further increases, especially for enrollees aged 12 – 20 years. MPRO recommends that improvement activities continue in order to increase visit rates for all age groups and delivery systems, as well as focused efforts to ensure each exam consists of the necessary assessments, components and screening. Specifically, the frequency of hearing, vision and dental screenings for all age groups is an area where improvement can impact other activities such as long-term development and school performance. Analysis to determine what is preventing the exams from taking place and why the necessary components are not completed can be especially useful in identifying targeted interventions and activities.

Appendices

Appendix A – Description of Medicaid Programs and Delivery Systems

Appendix B – Well-Child Focused Study Abstraction Tool

Appendix C – AAP Periodicity Schedule

Appendix D – Medical Record Request Letters

Appendix A – Description of Medicaid Programs and Delivery Systems

Medicaid Programs: Medicaid, FAMIS, and FAMIS Plus

DMAS is the single state agency in the Commonwealth of Virginia that administers Medicaid including FAMIS, Medicaid Expansion and Medicaid/FAMIS Plus programs.

FAMIS

DMAS administers the Virginia State Children's Health Insurance Program (SCHIP), known as "Family Access to Medical Insurance Security" (FAMIS), under Title XXI of the Social Security Act for low-income people. FAMIS was created in 2001 to ensure that a greater number of children could gain access to health insurance. FAMIS covers eligible children (who are not eligible for Medicaid, are not covered under health insurance, and are not members of a family eligible for coverage under the state employee health plan) from birth through age 18 in families with a gross income at or below 200% of the Federal Poverty Level.

FAMIS provides a comprehensive benefits package that includes well-child care and preventive services. Although FAMIS has cost sharing, FAMIS enrollees who are in MCOs will have only nominal co-payments. Cost sharing does not exceed 5% of a family's gross income for families with incomes from 150% to 200% of poverty, and is not required for well-child and preventive services. Cost sharing does not exceed 2.5% of gross income for families with incomes below 150% of poverty. Some children who live in areas where MCOs are not available access their care through FAMIS FFS. There is no cost sharing for clients in FAMIS FFS. Children enrolled in FAMIS, are enrolled in MCOs, if available in their locality.

SCHIP Medicaid Expansion

Operated under Title XXI of the Social Security Act, the SCHIP Medicaid Expansion program is for children aged six through 19 years in households with incomes ranging from 100% to 133% of the Federal Poverty Limit (children younger than six are covered by Medicaid).

Medicaid/FAMIS Plus

Medicaid/FAMIS Plus is for children aged 0 to 19 years in households with incomes ranging from 0% to 133% of the Federal Poverty Limit. The program is operated by DMAS under Title XIX of the Social Security Act.

Delivery Systems: FFS and Managed Care (MCO and PCCM)

DMAS provides Medicaid to individuals through two general care delivery models: a model utilizing contracted managed care organizations (MCO) to coordinate care; and a fee-for-service (FFS) model, the standard Medicaid program whereby service providers are reimbursed directly by DMAS. DMAS oversees the development, implementation, and operation of the managed care and FFS programs. Mandatory managed care operates under a CMS 1915(b) Waiver and in accordance with the Code of Federal Regulations. There are currently two Medicaid managed care options:

1. **MEDALLION** is a primary care case management program (PCCM) delivered through DMAS. In MEDALLION, a recipient's health care is managed by a primary care provider (PCP). The PCP manages the recipient's health care and acts as a gatekeeper for specialty service referrals. Providers are reimbursed on a FFS basis for all covered services rendered.

2. **Medallion II** is a program that delivers care through MCOs under contract with DMAS. In most areas of the Commonwealth, qualified Medicaid recipients choose between at least two contracted MCOs. In areas where only one contracted MCO participates, recipients have the choice of the MEDALLION PCCM or the Medallion II program. Under Medallion II, the contracted MCO receives a capitated payment that covers a comprehensive set of services, regardless of how much care is used by the recipient. The MCOs accept full financial risk for each recipient's health care.

Appendix B – Well-Child Focused Study Abstraction Tool

Selection Parameters	
Programs	FAMIS (Enrollee Eligibility Aid Category = 006, 007, 008, 009) Medicaid/FAMIS Plus (Enrollee Eligibility Aid Category = 071 – 076, 081 – 083, 085, 086, 088, 090 – 093, 097 – 099) SCHIP Medicaid Expansion (Enrollee Eligibility Aid Category = 094)
Delivery Systems	FFS (Benefit Definition Plan Subprogram Code = 01) PCCM (Medallion I) (Benefit Definition Plan Subprogram Code = 02, 07) MCO (Medallion II) (Benefit Definition Plan Subprogram Code = 03, 04)
Enrollment Criteria	15 – 27 months: 31 days through 15 months of age within the same delivery system and program. 3 – 20 years: continuous enrollment during calendar year 2006 within the same delivery system and program.
Age	15 – 27 months, 3 – 6 years, 7 – 11 years, 12 – 20 years
Sex	Male, Female
Office Visit Requirement	At least one visit with primary care practitioner
Review Period	1/1/2007 – 12/31/2007

Study Questions

1. What proportion of enrollees who turned 15 months old during the review period had the following number of well-child visits with a PCP during their first 15 months of life: zero, one, two, three, four, five, and six or more?
2. What proportion of enrollees aged 3 – 6 years had at least one comprehensive well-child visit with a PCP during the measurement period?
3. What proportion of enrollees aged 7 – 11 years had at least one comprehensive well-child visit with a PCP during the measurement period?
4. What proportion of enrollees aged 12 – 20 years had at least one comprehensive well care visit with a PCP during the measurement period?
5. What proportion of enrollees aged 15 – 27 months, 3 – 6 years, 7 – 11 years, or 12 – 20 years received the well-child service components during the measurement period?
6. Are enrollees receiving screening histories, measurements, sensory screening, and developmental assessments along with well-child service components at the American Academy of Pediatrics (AAP) and "Bright Futures" program recommended age-specific intervals?
7. Are enrollees receiving hemoglobin, lead, TB, and urinalysis screening at the AAP recommended age-specific intervals?

DEMOGRAPHIC INFORMATION				
Item #	**Description**	**Response**	**Sources**	**Instructions**
1.01	Enrollee ID	Preloaded from enrollment file	Preloaded	Assume preloaded information is correct
1.02	Enrollee Last Name	Outside or inside flap of medical record; copy of insurance card, face sheet, data demographic sheet.	Preloaded and optional entry	If last name documented in the medical record is different from the preloaded last name, record the last name from the medical record. Check other information such as date of birth to confirm you have the right person.
1.03	Enrollee First Name	Outside or inside flap of medical record; copy of insurance card, face sheet, data demographic sheet.	Preloaded and optional entry	If first name documented in the medical record is different from the preloaded first name, record the first name from the medical record. Check other information such as date of birth to confirm you have the right person.
1.04	Enrollee Middle	Preloaded from enrollment file	Preloaded	Assume preloaded information is correct

DEMOGRAPHIC INFORMATION				
Item #	**Description**	**Response**	**Sources**	**Instructions**
	Initial			
1.05	Enrollee Sex	Preloaded from enrollment file	Preloaded	Assume preloaded information is correct
1.06	Enrollee Birth Date	Face sheet, data demographic sheet, labeled outside of the medical record, copy of drivers license.	Preloaded and optional entry	If birth date documented in the medical record is different from the preloaded birth date, record the birth date from the medical record. Check other information such as demographics to make sure you have the right person. It could be another person with the same name.
1.07	Delivery System	Preloaded from enrollment file	Preloaded	Assume preloaded information is correct
1.08	Program	Preloaded from enrollment file	Preloaded	Assume preloaded information is correct

WELL-CHILD					
Item #	**Age Group**	**Description**	**Response**	**Sources**	**Instructions**
2.01	☑ 15-27 mo ☑ 3-6 yrs ☑ 7-11 yrs ☑ 12-20 yrs	Did the enrollee receive at least one office visit in the review period?	▪ Yes ▪ No	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes.	Preventative services may be rendered on visits other than the well-child visit. These services count, regardless of the primary intent of the visit. Example of this would be sick visits, acute visits, etc. Exclusions: Blood pressure checks, telephone calls, inpatient, emergency room and specialist visits.
2.02	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Enrollee received at least one comprehensive well-child exam during the review period?	▪ Yes ▪ No	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes.	Documentation from the medical record must include a note indicating a visit with a primary care practitioner, the date of the well-child visit and evidence of the components that make up a comprehensive well-child exam: ▪ A physical exam ▪ A health and developmental history ▪ Anticipatory guidance assessment The primary care practitioner does not have to be the practitioner assigned to the child. Inclusion of non-physician practitioners such as nurse practitioners and physician assistants are acceptable. Visits to school–based clinics with practitioner types considered primary care practitioners may be counted if documentation of a well-child exam is available in the medical record during the review period. Preventative services may be rendered on visits other than the well-child visit. These services count, regardless of the primary intent of the visit. Inpatient, emergency room and specialist visits do not count for this measure.

WELL-CHILD					
Item #	**Age Group**	**Description**	**Response**	**Sources**	**Instructions**
2. 02a	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Enter dates of ***all*** comprehensive well-child exam(s) during the review period.	mm/dd/yyyy **(grid for multiple entries)**	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes.	The AAP recommends that children visit their pediatrician for a well- child check-up as a newborn, by one month, at two, four, six, nine, twelve, fifteen, eighteen, and twenty-four months, and once a year from ages three to twenty-one. Well-Child care for infants are of particular importance during the first year of life, when an infant undergoes substantial changes in abilities, physical growth, motor skills, hand-eye coordination and social and emotional growth. The AAP also recommends six well-child visits in the first year of life: the first within the first month of life, and then at around 2, 4, 6, 9, and 12 months of age. Comprehensive well-child exam documentation measures the percentage of children who had one, two, three, four, five, six or more well-child visits by the time they turned 15 months of age. Services (physical exam, developmental history and anticipatory guidance) that occur over multiple visits toward this measure count as long as all the services occur within the time frame established in the measure (1/1/007-1/31/007). Inpatient, emergency room and specialist visits do not count for this measure.
2.03	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Check all components of a well-child physical exam assessed.	▪ Cardiac ▪ Extremities ▪ Gastrointestinal ▪ Genitourinary ▪ Head circumference ▪ (**0-25 months only)** ▪ HEENT (head, eyes, ears, nose and throat) ▪ Musculoskeletal ▪ Neck ▪ Nervous system ▪ Respiratory ▪ None of the above	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes.	A comprehensive physical exam includes assessment of the following components: cardiac, extremities, gastrointestinal, genitourinary, head circumference, **(for 0-25 months only),** HEENT (head, eyes, ears, nose and throat), musculoskeletal, neck, nervous system, respiratory and urogenital systems. Services (physical exam, developmental history and anticipatory guidance) that occur over multiple visits toward this measure count as long as all the services occur within the time frame established in the measure (1/1/007-1/31/007). **Recommended physical examination components; Bright Futures.org, Health check, exams.*
2.04	☑ 15-27 mo	Check all the components of the	▪ Birth history ▪ Developmental	History & physical, well-child forms,	A comprehensive health history includes birth history along with

WELL-CHILD					
Item #	Age Group	Description	Response	Sources	Instructions
	☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	health and developmental assessment the enrollee received.	milestones ▪ Familial history ▪ All of the above ▪ None of the above	problem lists, check lists, graphs, and progress notes and developmental narrative or checklists.	complete family and social history. The developmental assessment may include a listing of age appropriate milestones achieved, or a checklist of tasks the child is able to perform such as gross motor and fine motor skills. Also other milestones that could be included in developmental assessments are intellectual, psychosocial, cognitive development measures along with speech and language assessments. Some examples of components of a health and developmental assessment are listed below. ***Birth history*** - Premature birth, weight, length at birth. ***Developmental milestones***- *(Age appropriate.)* This is the evaluation of the child's physical and developmental status and psychosocial adjustment including school performance, peer and family relationships. Fine and gross motor skills, behavioral and social status, self-help or self-care, problem solving, cognition or school readiness. Some examples but not all inclusive are; infant toddler- play , social, interaction, tantrums, sleep patterns, separation anxiety, toilet training, day care preschool. For the school age /adolescent: play school, friends, peer pressure, parent -child conflict. For the adolescent dating, drinking drugs, peers, school. ***Familial history***-Familial disease history; diabetes, hypertension, cancer or, genetic history, adopted, foster child, history of divorce or death. Services (physical exam, developmental history, and anticipatory guidance) that occur over multiple visits toward this measure count as long as all the services occur within the timeframe established in the measure (1/1/2007 thru 12/31/2007).
2.05	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Check all the components of anticipatory guidance the enrollee received.	▪ Daily hygiene & care ▪ Feeding & nutrition ▪ Injury prevention ▪ Oral/Dental health	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes. Anticipatory guidance checklists are also accepted.	Age appropriate anticipatory guidance includes education from the provider for upcoming milestones and expectations based on age group. Some examples but not all-inclusive are listed below. -Daily hygiene & care- Diaper rash, sleep patterns, adequate sleep, and

WELL-CHILD					
Item #	Age Group	Description	Response	Sources	Instructions
			▪ School, peer and social interactions ▪ Social interaction ▪ All of the above ▪ None of the above		personal hygiene. -Feeding and nutrition- breastfeeding, bottle-feeding, cereals vs. solid foods, nutritious snacks, body image, weight gain or loss, soda pop and healthy snacks guidance. Injury prevention-safe cribs, car seats, safe toys, falls, bike helmets, fire safety, dealing with strangers, safe dating, physical, emotional or sexual abuse and conflict resolution are some examples. -Oral/Dental health- no bottles in bed, teething, brushing flossing, and fluoride supplements, visiting the dentist. -School & peer and social interaction- reading to baby, child care, respect for authority, sports, peer pressure, bullies, after school activities, planning for the future; college, hobbies, community involvement, military consideration, etc. Services (physical exam, developmental history, and anticipatory guidance) that occur over multiple visits toward this measure count as long as all the services occur within the time frame established in the measure (1/1/2007-thru 12/31/2007).
2.06	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Enrollee received at least one height measurement during the review period?	▪ Yes ▪ No	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes.	Height must be noted to answer this question yes. Preventative services may be rendered on visits other than well-child visits. These services count, regardless of the primary intent of the visit. Inpatient, emergency room and specialist visits do not count for this measure.
2.07	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Enrollee received at least one weight measurement during the review period?	▪ Yes ▪ No	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes.	Weight must be noted to answer this question yes. Preventative services may be rendered on visits other than well-child visits. These services count, regardless of the primary intent of the visit. Inpatient, emergency room and specialist visits do not count for this measure.
2.08	☑ 15-27 mo NOT 3–6 yrs	Enrollee received at least one head circumference measurement	▪ Yes ▪ No	History & physical, well-child forms, problem lists, check lists, graphs, and	Head circumference may be documented as HC (Head Circumference), OFC (Occipital – Frontal

WELL-CHILD					
Item #	Age Group	Description	Response	Sources	Instructions
	NOT 7–11 yrs NOT 12–20 yrs	during the review period?		progress notes.	Circumference), or may be documented as a dot on a graph. Head circumference measurement is recommended at every visit from birth to approximately 24 months of age. Preventative services may be rendered on visits other than well-child visits. These services count, regardless of the primary intent of the visit. Inpatient, emergency room and specialist visits do not count for this measure.
2.09	NOT 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Enrollee received at least one blood pressure measurement during the review period?	▪ Yes ▪ No	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes.	Blood pressure assessment is recommended to start by age 3 and above. Blood pressure value must be recorded or there must be an indication that it was attempted. Preventative services may be rendered on visits other than well-child visits. These services count, regardless of the primary intent of the visit. Inpatient, emergency room and specialist visits do not count for this measure.
2.10	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Enrollee received at least one vision assessment during the review period?	▪ Yes ▪ No	History & physical, well-child forms, check lists, graphs, progress notes, vision assessment checklists, referral forms with documented assessment or results.	Vision assessment may include both subjective methods (health history, risk assessment & physical exam) and objective vision tests. Subjective methods such as the enrollee's school performance due to reading and writing difficulties due to poor vision may be reported. For young children examples likely to be recorded are, "follows with eyes", "points to named picture or body part". For 0 – 5 yrs physical assessments such as ocular history, vision assessment, external inspection of eyes and lids, ocular motility assessment, pupil examination are acceptable. Documentation of "positive red reflex" is acceptable with very young infants. Notation "wears glasses" or "has eye appt" without documentation of results from an eye exam are ***NOT*** acceptable. Preventative services may be rendered on visits other than well-child visits. These services count, regardless of the primary intent of the

WELL-CHILD					
Item #	Age Group	Description	Response	Sources	Instructions
					visit. Referrals without evidence of completion of testing, or results not clearly noted in the chart, do *NOT* indicate receipt of assessment.
2.11	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Enrollee received at least one hearing assessment during the review period?	▪ Yes ▪ No	History & physical, well-child forms, check lists, graphs, progress notes, hearing assessment checklists, referral forms with documented assessments or results.	Hearing assessment may include both subjective methods (health history, risk assessment & physical exam) and objective (pure tone) hearing tests. Subjective methods such as the enrollee's response to voices and other auditory stimuli will be assessed along with delayed speech development, chronic or recurrent otitis media or other risk indicators. For young children likely examples to be recorded are: "follows two word commands", "points to named picture", "points to body parts", understands commands". Preventative services may be rendered on visits other than well-child visits. These services count, regardless of the primary intent of the visit. Referrals without evidence of completion of testing, or results not clearly noted in the chart, do *NOT* indicate receipt of assessment.
2.12	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Enrollee received at least one dental inspection during the review period?	▪ Yes ▪ No	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes.	Description of dentition or condition of primary or permanent teeth. Also an inspection may be of the palate, cheeks, tongue and floor of mouth. Notation of erupting teeth, gum inspection, dental caries and questionnaires or checklists noting brushing teeth, fluoridated water, dental visits, and dental sealants are acceptable. Preventative services may be rendered on visits other than well-child visits. These services count, regardless of the primary intent of the visit. Recommended physical examination components; Bright Futures.org, Health check, exams.
2.13	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20	Enrollee referred to a dental provider during the review period?	▪ Yes ▪ No ▪ Refused mm/dd/yyyy	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes.	A referral to a dentist at or after one year of age is recommended. A referral to a dentist is mandatory at three years of age and annually thereafter through the age of twenty (20) years. Use "SHIFT X" in corresponding fields

WELL-CHILD					
Item #	Age Group	Description	Response	Sources	Instructions
	yrs				if date not documented.
2.14	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs NOT 12–20 yrs	Enrollee received ***verbal*** lead risk assessment during the review period?	▪ Assessed- no risk mm/dd/yyyy ▪ Assessed low risk- mm/dd/yyyy ▪ Assessed high- risk- mm/dd/yyyy ▪ No assessment	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes.	The ***verbal lead risk*** assessment includes, at a minimum, the following types of questions: 1. Does the child live in (or often visit) a house built before 1960 with peeling or chipping paint? 2. Does the child live in or regularly visit a house built before 1960 with recent, ongoing or planned renovation or remodeling? 3. Does the child or their playmates have or have had lead poisoning? 4. Does the child frequently come in contact with an adult who works with lead? Examples include construction, welding, pottery or other trades practiced in their community. 5. Does the child receive folk remedies that may contain lead? A child's risk category can change with each administration of verbal risk assessment. Use "SHIFT X" in corresponding fields if date not documented. A child's risk category can change with each administration of verbal risk assessment. **Special Note** -Lead screening notations, lead screening check box formats, or other evidence in the medical record for verbal lead risk assessments is acceptable. -If the answer to any question is "Yes" with verbal lead risk assessments or unknown, a child is considered at high risk for high doses of lead exposure. -All children enrolled on Medicaid should automatically be considered high risk".
2.15	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs NOT 12–20 yrs	Enrollee received blood lead test during the review period.	▪ Yes- **Open below** ▪ No- **Skip to 2.15** ▪ Refused mm/dd/yyyy ▪ ____µg/dL mm/dd/yyyy	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes, lab sheets.	*All children require a lead test between 9 & 12 months and at 24 months. Children 26-72 months require a test if not previously tested or if test history is unknown. Lead level concern: greater than or equal to 10 ug/dl [1] "Yes" will open value of blood lead test. Use "SHIFT X" in corresponding fields if date not documented. (Source- Bright Futures.org, American

WELL-CHILD					
Item #	**Age Group**	**Description**	**Response**	**Sources**	**Instructions**
					Academy of Pediatrics Periodicity Table)
2.16	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Enrollee received at least one nutritional assessment during the review period?	▪ Yes ▪ No	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes.	Documentation of dietary intake, eating/snack habits, food choices/fast food discussion, checklists of fruits, vegetables and grains acceptable. Preventative services may be rendered on visits other than well-child visits. These services count, regardless of the primary intent of the visit.
2.17	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Enrollee received an immunization review by the provider during the review period?	▪ Yes ▪ No	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes. Also immunization records & Virginia Immunization Information System (VIIS) sheets.	An immunization review might be documented as "UTD" (up to date). Respond "Yes" if there is any indication that an immunization was given, due or was deferred. Checklist formats or physician notes are acceptable as documentation. Preventative services may be rendered on visits other than well-child visits. These services count, regardless of the primary intent of the visit. Inpatient, emergency room and specialist visits do not count for this measure.
2.18	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Enrollee assessed for Tuberculin (TB) risk factors during the review period?	▪ Assessed-No risk factors identified ▪ Assessed-risk factors identified ▪ No assessment	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes. Also immunization records & Virginia Immunization Information system (VIIS) sheets.	Risk factors include: contact with people with infectious TB, family immigration or travel in regions where TB is prevalent, abnormalities on chest x-ray suggestive of TB, HIV-seropositive status, immunosuppressive conditions, other medical risk factors (Hodgkin's disease, lymphoma, diabetes mellitus, and chronic renal failure) or homelessness. ***Recommended developmental ages- Test at 12 months, once between 3& 5 yrs (if child at high risk, between 15 & 24 months, annually at age 8, annually at adolescence.*** ***(source- Bright Futures.org)*** ***(American Academy of Pediatrics Periodicity Table)***
2.19	☑ 15-27 mo ☑ 3–6 yrs	Document enrollee's tuberculin (TB) skin test results	▪ Negative-mm/dd/yyyy ▪ Positive-mm/dd/yyyy	History & physical, well-child forms, problem lists, check lists, graphs, and	The test for TB using the Mantoux method is an intradermal injection of positive protein derivative (PPD).

WELL-CHILD					
Item #	**Age Group**	**Description**	**Response**	**Sources**	**Instructions**
	☑ 7–11 yrs ☑ 12–20 yrs	and date.	▪ None documented	progress notes. Also immunization records and VIIS sheets.	Use "SHIFT X" in corresponding fields if date not documented.
2.20	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Enrollee received at least one hematocrit or hemoglobin blood test during the review period? If "Yes" document date and hematocrit ***or*** hemoglobin blood test result.	▪ Yes- **Open below** ▪ No ▪ Refused mm/dd/yyyy ▪ Hematocrit mm/dd/yyyy ▪ Hemoglobin mm/dd/yyyy	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes, lab sheets.	Enrollees at high risk or those with known risk factors need to be tested for iron-deficiency anemia with a standard laboratory test. If multiple hematocrit or hemoglobin blood tests are found in the medical record, enter the most recent to the end of the review period. Use "SHIFT X" in corresponding fields if date not documented. Preventative services may be rendered on visits other than well-child visits. These services count, regardless of the primary intent of the visit. Referrals without evidence of completion of testing, or results not clearly noted in the chart, do *NOT* indicate receipt of assessment.
2.21	☑ 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Enrollee received at least one urinalysis test during the review period?	▪ Yes- mm/dd/yyyy ▪ No ▪ Refused- mm/dd/yyyy	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes, lab sheets.	Record urinalysis as "Yes" if office dipstick performed. If multiple urinalysis tests are found in the medical record, enter the most recent to the end of the review period. Use "SHIFT X" in corresponding fields if date not documented. Preventative services may be rendered on visits other than well-child visits. These services count, regardless of the primary intent of the visit. Referrals without evidence of completion of testing, or results not clearly noted in the chart, do *NOT* indicate receipt of assessment.
2.22	NOT 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20	Enrollee received cholesterol history assessment during the review period?	▪ Yes – No risk factors identified ▪ Yes – Risk factors identified ▪ No	Risk assessments focus on familial history, large change in body mass index or weight concerns. Cholesterol history	Risk assessments focus on familial history, large change in body mass index or weight concerns. Cholesterol history along with a cholesterol blood test should be done upon recognition of high risk factors.

WELL-CHILD					
Item #	Age Group	Description	Response	Sources	Instructions
	yrs		assessment during the measure-ment year	along with a cholesterol blood test should be done upon recognition of high risk factors.	Preventative services may be rendered on visits other than well-child visits. These services count, regardless of the primary intent of the visit.
2.22a	NOT 15-27 mo ☑ 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Document date and cholesterol blood test result.	▪ Cholesterol level _____ mm/dd/yyyy	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes, lab sheets.	If multiple cholesterol blood tests are found in the medical record, enter the most recent to the end of the review period. Use "SHIFT X" in corresponding fields if date not documented. Enter ***Total*** cholesterol value Referrals without evidence of completion of testing, or results not clearly noted in the chart, do *NOT* indicate receipt of testing. If cholesterol blood test is found outside of review period, document that date.
2.23	NOT 15-27 NOT 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Female enrollee received a pelvic exam during the review period?	▪ Yes- mm/dd/yyyy ▪ No ▪ Refused- mm/dd/yyyy ▪ NA	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes.	Preventative services may be rendered on visits other than well-child visits. These services count, regardless of the primary intent of the visit. NA- Male enrollee Use "SHIFT X" in corresponding fields if date not documented.
2.24	NOT 15-27 NOT 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Enrollee screened for sexual activity?	▪ Yes ▪ No	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes.	Sexual exploration is a concern during early Adolescence. Young teens that are already sexually active need guidance in understanding and practicing protective behaviors to minimize their risk of becoming pregnant or acquiring sexually transmitted diseases. Preventative services may be rendered on visits other than well-child visits. These services count, regardless of the primary intent of the visit.
2.25	NOT 15-27 NOT 3–6 yrs ☑ 7–11 yrs ☑ 12–20	Enrollee sexually active?	▪ Yes ▪ No ▪ Refused	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes.	

WELL-CHILD					
Item #	**Age Group**	**Description**	**Response**	**Sources**	**Instructions**
	yrs				
2.26	NOT 15-27 mo NOT 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Enrollee received screening for sexually transmitted diseases (STD) during the review period?	▪ Yes- Risk factors identified- **Open 2.26** ▪ Yes- No risk factors identified ▪ No assessment	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes.	STD assessment should be done upon recognition of high risk factors. Preventative services may be rendered on visits other than well-child visits. These services count, regardless of the primary intent of the visit.
2.27	NOT 15-27 mo NOT 3–6 yrs ☑ 7–11 yrs ☑ 12–20 yrs	Enrollee received counseling regarding safe sex practices?	▪ Yes ▪ No	History & physical, well-child forms, problem lists, check lists, graphs, and progress notes.	Documentation in the medical record should reflect that the enrollee received counseling regarding safe sex practices. Examples such as pamphlets, educational materials, referrals or any notation found during the review period.

Appendix C – AAP Periodicity Schedule

Recommendations for Preventive Pediatric Health Care (RE9939)

Committee on Practice and Ambulatory Medicine

Each child and family is unique; therefore, these **Recommendations for Preventive Pediatric Health Care** are designed for the care of children who are receiving competent parenting, have no manifestations of any important health problems, and are growing and developing in satisfactory fashion. **Additional visits may become necessary** if circumstances suggest variations from normal.

These guidelines represent a consensus by the Committee on Practice and Ambula ional committees and sections of the American Academy of Pediatrics. The Committee emphasizes the great importance of **continuity of care** in comprehensive health supervision and the need to avoid **fragmentation of care.**

	INFANCY[4]									EARLY CHILDHOOD[4]				
AGE[5]	PRENATAL[1]	NEWBORN[2]	2-4d[3]	By 1mo	2mo	4mo	6mo	9mo	12mo	15mo	18mo	24mo	3y	4y
HISTORY														
Initial/Interval	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MEASUREMENTS														
Height and Weight		•	•	•	•	•	•	•	•	•	•	•	•	•
Head Circumference		•	•	•	•	•	•	•	•	•	•	•		
Blood Pressure													•	•
SENSORY SCREENING														
Vision		S	S	S	S	S	S	S	S	S	S	S	O[6]	O
Hearing		O[7]	S	S	S	S	S	S	S	S	S	S	S	O
DEVELOPMENTAL/ BEHAVIORAL ASSESSMENT[8]		•	•	•	•	•	•	•	•	•	•	•	•	•
PHYSICAL EXAMINATION[9]		•	•	•	•	•	•	•	•	•	•	•	•	•
PROCEDURES-GENERAL[10]														
Hereditary/Metabolic Screening[11]		←	•	→										
Immunization[12]		•	•	•	•	•	•	•	•	•	•	•	•	•
Hematocrit or Hemoglobin[13]								•	→	•	•	•	•	•
Urinalysis														
PROCEDURES-PATIENTS AT RISK														
Lead Screening[16]								•	→			•		
Tuberculin Test[17]									•	•	•	•	•	•
Cholesterol Screening[18]												•	•	•
STD Screening[19]														
Pelvic Exam[20]														
ANTICIPATORY GUIDANCE[21]	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Injury Prevention[22]	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Violence Prevention[23]	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Sleep Positioning Counseling[24]	•	•	•	•	•	•	•							
Nutrition Counseling[25]	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DENTAL REFERRAL[26]									←	—	—	—	•	

	MIDDLE CHILDHOOD[4]				ADOLESCENCE[4]										
AGE[5]	5y	6y	8y	10y	11y	12y	13y	14y	15y	16y	17y	18y	19y	20y	21y
HISTORY															
Initial/Interval	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MEASUREMENTS															
Height and Weight	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Head Circumference															
Blood Pressure	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
SENSORY SCREENING															
Vision	O	O	O	O	S	O	S	S	O	S	S	O	S	S	S
Hearing	O	O	O	O	S	O	S	S	O	S	S	O	S	S	S
DEVELOPMENTAL/ BEHAVIORAL ASSESSMENT[8]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
PHYSICAL EXAMINATION[9]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
PROCEDURES-GENERAL[10]															
Hereditary/Metabolic Screening[11]															
Immunization[12]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Hematocrit or Hemoglobin[13]	*				←		•[14]								→
Urinalysis	•				←					•[15]					→
PROCEDURES-PATIENTS AT RISK															
Lead Screening[16]															
Tuberculin Test[17]	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Cholesterol Screening[18]	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
STD Screening[19]					*	*	*	*	*	*	*	*	*	*	*
Pelvic Exam[20]					*	*	*	*	*	*	*	*	←[24]	*	→ *
ANTICIPATORY GUIDANCE[21]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Injury Prevention[22]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Violence Prevention[23]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Sleep Positioning Counseling[24]															
Nutrition Counseling[25]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DENTAL REFERRAL[26]															

1. A prenatal visit is recommended for parents who are at high risk, for first-time parents, and for those who request a conference. The prenatal visit should include anticipatory guidance, pertinent medical history, and a discussion of benefits of breastfeeding and planned method of feeding per AAP statement "The Prenatal Visit" (1996).
2. Every infant should have a newborn evaluation after birth. Breastfeeding should be encouraged and instruction and support offered. Every breastfeeding infant should have an evaluation 48-72 hours after discharge from the hospital to include weight, formal breastfeeding evaluation, encouragement, and instruction as recommended in the AAP statement "Breastfeeding and the Use of Human Milk" (1997).
3. For newborns discharged in less than 48 hours after delivery per AAP statement "Hospital Stay for Healthy Term Newborns" (1995).
4. Developmental, psychosocial, and chronic disease issues for children and adolescents may require frequent counseling and treatment visits separate from preventive care visits.
5. If a child comes under care for the first time at any point on the schedule, or if any items are not accomplished at the suggested age, the schedule should be brought up to date at the earliest possible time.
6. If the patient is uncooperative, rescreen within 6 months.
7. All newborns should be screened per the AAP Task Force on Newborn and Infant Hearing statement, "Newborn and Infant Hearing Loss: Detection and Intervention" (1999).
8. By history and appropriate physical examination: if suspicious, by specific objective developmental testing. Parenting skills should be fostered at every visit.
9. At each visit, a complete physical examination is essential, with infant totally unclothed, older child undressed and suitably draped.
10. These may be modified, depending upon entry point into schedule and individual need.
11. Metabolic screening (eg, thyroid, hemoglobinopathies, PKU, galactosemia) should be done according to state law.
12. Schedule(s) per the Committee on Infectious Diseases, published annually in the January edition of *Pediatrics*. Every visit should be an opportunity to update and complete a child's immunizations.
13. See AAP *Pediatric Nutrition Handbook* (1998) for a discussion of universal and selective screening options. Consider earlier screening for high-risk infants (eg, premature infants and low birth weight infants). See also "Recommendations to Prevent and Control Iron Deficiency in the United States". *MMWR*. 1998;47 (RR-3):1-29.
14. All menstruating adolescents should be screened annually.
15. Conduct dipstick urinalysis for leukocytes annually for sexually active male and female adolescents.
16. For children at risk of lead exposure consult the AAP statement "Screening for Elevated Blood Levels" (1998). Additionally, screening should be done in accordance with state law where applicable.
17. TB testing per recommendations of the Committee on Infectious Diseases, published in the current edition of *Red Book: Report of the Committee on Infectious Diseases*. Testing should be done upon recognition of high-risk factors.
18. Cholesterol screening for high-risk patients per AAP statement "Cholesterol in Childhood" (1998). If family history cannot be ascertained and other risk factors are present, screening should be at the discretion of the physician.
19. All sexually active patients should be screened for sexually transmitted diseases (STDs).
20. All sexually active females should have a pelvic examination. A pelvic examination and routine pap smear should be offered as part of preventive health maintenance between the ages of 18 and 21 years.
21. Age-appropriate discussion and counseling should be an integral part of each visit for care per the AAP *Guidelines for Health Supervision III* (1998).
22. From birth to age 12, refer to the AAP injury prevention program (TIPP®) as described in *A Guide to Safety Counseling in Office Practice* (1994).

23. Violence prevention and management for all patients per AAP Statement "The Role of the Pediatrician in Youth Violence Prevention in Clinical Practice and at the Community Level" (1999).
24. Parents and caregivers should be advised to place healthy infants on their backs when putting them to sleep. Side positioning is a reasonable alternative but carries a slightly higher risk of SIDS. Consult the AAP statement "Changing Concepts of Sudden Infant Death Syndrome: Implications for Infant Sleeping Environment and Sleep Position" (2000).
25. Age-appropriate nutrition counseling should be an integral part of each visit per the AAP *Handbook of Nutrition* (1998).
26. Earlier initial dental examinations may be appropriate for some children. Subsequent examinations as prescribed by dentist.

Key: ● = to be performed ★ = to be performed for patients at risk
S = subjective, by history O = objective, by a standard testing method
◄—●—► = the range during which a service may be provided, with the dot indicating the preferred age.

American Academy of Pediatrics

NB: Special chemical, immunologic, and endocrine testing is usually carried out upon specific indications. Testing other than newborn (eg, inborn errors of metabolism, sickle disease, etc) is discretionary with the physician.

Appendix D – Medical Record Request Letters

MPRO

22670 Haggerty Road, Suite 100, Farmington Hills, MI 48335-2611 ● (248) 465-7300 ● Fax (248) 465-7428 ● www.mpro.org

July 3, 2008

[HMO inside address]

Dear [HMO contact],

MPRO serves as the External Quality Review Organization (EQRO) for the Department of Medical Assistance Services (DMAS) in the Commonwealth of Virginia. MPRO is conducting a number of focused studies to evaluate care provided to Medicaid and FAMIS enrollees. Two of the studies, childhood immunizations and well-child visits, are being conducted using the hybrid methodology, similar to the 2008 HEDIS technical specifications. Therefore, we need your help with achieving a high response rate to the medical record requests for your Medicaid enrollees. The medical records will be abstracted by MPRO. The relevant administrative data has already been provided by DMAS to MPRO for the studies.

MPRO is authorized to request medical records on behalf of DMAS for focused studies. Please see the attached letter on DMAS letterhead authorizing our request.

The enclosed (password-protected) CD contains the name, recipient ID number, sex, and birth date for sampled members. By now, you should have received a password via e-mail from [name] that will enable you to read the CD. **Enrollees should be matched to the provider who most likely provided well-child services during the review period of calendar year 2007**. Each enrollee was randomly selected from all Medicaid enrollees that met the study criteria. This study is not intended to evaluate individual providers of care, but rather the different delivery systems within the Medicaid program. The data collected on your members will be presented in aggregate, and not by individual MCO or provider.

Please provide a copy of the medical record for the sampled enrollees of your MCO. **For patients aged 15 months through – 27 months during 2007, we need the entire medical record from birth to present.** For all other patients, the following record components are required:

- All pages for service dates in 2007
- Face sheet
- Immunization record
- Medication list
- Laboratory results
- Problem lists
- Office visit note

Medical records must be submitted to MPRO by August 14, 2008. Please mail medical records to MPRO, Attention: [name] at the address above.

Thank you for again taking time to assist DMAS and MPRO in completing the immunization and well-child focused studies. If you have any questions regarding this request, feel free to contact me at [e-mail] or by telephone at [phone].

Sincerely,

[name]

Director, External Quality Review
Enclosures:
CD
DMAS memo

MPRO

22670 Haggerty Road, Suite 100, Farmington Hills, MI 48335-2611 ● (248) 465-7300 ● Fax (248) 465-7428 ● www.mpro.org

September 11, 2008

RE: AUTHORIZED REQUEST FOR MEDICAL RECORDS

RESPONSE DUE: September 17, 2008

Dear Medicaid/FAMIS Provider:

MPRO is conducting several statewide assessments on the care provided to Medicaid/FAMIS enrollees. Two of the assessments, childhood immunizations and well-child visits, necessitate the use of administrative data and data obtained through medical record abstraction. In order for the assessment to accurately reflect the extent of adherence to childhood immunization schedules and well-child visits, it is imperative that you provide us with the medical records requested in the enclosed list. MPRO is contracted by Virginia's Department of Medical Assistance Services (DMAS) to serve as the External Quality Review Organization (EQRO) and, as such, is authorized to request medical records on their behalf for the statewide assessments.

Please see attached letter from DMAS authorizing our request.

Your cooperation is requested in providing copies of your medical records for the patients included on the enclosed list. **For patients aged 15 months through 27 months during 2007, please send the <u>entire</u> medical record, from birth to present.** For all other patients, the following record components are required:

- All pages re: service dates in 2007
- Face sheet
- Immunization record
- Medication list
- Laboratory results
- Problem lists
- Office visit notes

Each enrollee was randomly selected from all enrollees that met the criteria for each assessment. The assessments are not intended to evaluate individual providers of care, but rather the different delivery systems within the Medicaid and FAMIS programs.

Please return the enclosed patient list with the medical records and check the appropriate patient status. You are encouraged to fax medical records to MPRO at [phone], but they can also be mailed using the address provided. If you have any questions concerning the submission of the requested medical record information, please contact [name] at [phone].

Thank you for taking time to ensure that enrollees are receiving appropriate well-child care and timely immunizations.

Sincerely,

[name]

Director, External Quality Review

September 11, 2008

Dear Medicaid/FAMIS Provider:

Virginia's Department of Medical Assistance Services' (DMAS) is responsible for administering the Medicaid and State Children's Health Insurance Program (SCHIP). The SCHIP program in Virginia is known as "Family Access to Medical Insurance Security" (FAMIS). In its efforts to monitor and continuously improve the care received by enrollees in Medicaid and FAMIS, DMAS has contracted with MPRO, an external quality review organization, to measure the extent of adherence to childhood immunization schedules and well-child visits.

In order for MPRO to adequately assess and report on the extent of compliance with immunization and well-child recommendations, **your timely response to MPRO's enclosed medical record request is imperative**. You are one of many providers that we are counting on in order for DMAS to have accurate and timely information on immunizations and well-child visits. Data collected from your medical records will be analyzed, synthesized and reported as aggregate numbers. All of the information, including your name, will be kept confidential.

DMAS has the legal authority to request medical records of Medicaid recipients as delineated in the following citations from The Code of Virginia, the Federal Register, the Medicaid Provider Participation Agreement, the Medicaid Physician Manual, and the Medicaid Application:

1. **The Medicaid Provider Participation Agreement** that you signed which states, "Access to records and facilities by authorized VMAP representatives…will be permitted upon reasonable request.
2. **The Medicaid Physician Manual Participation Requirements** which states, "Providers approved for participation in the Medical Assistance Program must perform the following activities as well as any other specified by DMAS: Furnish to authorized State and Federal personnel, in the form and manner requested, access to records and facilities".
3. **Code of Virginia § 32.1-46 Immunization of children against certain diseases; authority to share immunization records.** "For the purpose of protecting the public health by ensuring that each child receives age-appropriate immunizations, any physician, licensed institutional health care provider, local or district health department, and department of health may share immunization and child locator information, including, but not limited to, the month, day, and year of each administered immunization; the child's name, address, telephone number, birth date, and social security number; and the parent's names."
4. **Federal Regulation: 45 CFR Parts 160 through 164. Standards for Privacy of Individually Identifiable Health Information.** The new medical information privacy rule went into effect April 14, 2003. The rule applies different levels of consent requirements for patient-identified medical information. The least restrictive is a standard consent that may be signed that allows providers to share information for billing purposes, for health care operations, and a variety of other functions. The definitions of health care operations include, "Conducting quality assessment and improvement activities, including outcome evaluation and development of clinical guidelines, provided that the obtaining of generalizable knowledge is not the primary purpose of any studies resulting from such activities; population-based activities relating to improving health or reducing health care costs, protocol development, case management and care coordination, contacting of health care providers and patients with information about treatment alternatives; and related functions that do not include treatment." The exception to this consent is psychotherapy notes, which will require a higher level, disclosure-specific authorization (as distinguished from *consent*) from the patient. This request for immunizations and well- child visit information falls under the category of *health operations*.
5. **Medicaid Application.** At the time that individuals apply for Medicaid, they sign the following statement: "I authorize release to the Department of Medical Assistance Services any information in any medical records pertaining to any service received by me or the individuals for whom I am applying for Medicaid or Title XXI State Children's Health Insurance Program."

Thank you for your cooperation in our efforts to track the number of children in Medicaid and FAMIS who are receiving regular well-child care and immunizations.

Sincerely,

Douglas C. Hartman
Supervisor, HCS Systems & Reporting
Department of Medical Assistance Services